

# THE ROYAL Almanack:

OR, A  
DIARY  
OF THE

True Places of the Sun, Moon, and Planets,  
their Rising, Southing, and Setting;

High-water at *London-bridg*, with Rules to  
serve other Places after the *New Theory*  
of Tides, and Directions of

Sir JONAS MOORE.

To which are added,

The *Eclipses*, with a Table of Equations for  
the Regulating curious *Pendulum-Clocks*, and  
movements to the Sun.

A Table of the Sun's right Ascension in time for every  
day at Noon, and Thirty of the most notable fixed Stars.

With the Moon and other the Planets Appulses to  
the fixed Stars, for the Meridian of *London*, Anno 1678.  
and of His Majesties Happy Reign 30.

All done with great Pains, according to the Rules of  
Art, for His Majesties Use, and at his Command.

By N. Stephenson, one of His Majesties Gunners.

L O N D O N:

Printed by A.C. for the Company of Stationers, 1678.

# January hath xxxi. days.

Last quarter the 5. day, at 1. 39. in the morning.

New Moon the 12. day, at 9.6. at night.

First quarter the 19. day, at 3.43. afternoon.

Full Moor the 27. day, at 3. 30. afternoon.

| M.D. | W.D. | Festivals & Plan.<br>Ris. Sou. and Set. | ☉ Place                  | ☽ Place                  | ☽ Lat. | Full Sea<br>Lond. Br. |
|------|------|---|--------------------------|--------------------------|--------|-----------------------|
| 1    | a    | New-years d.                            | 21 $\text{V}^{\circ}$ 45 | 0 $\text{M}^{\circ}$ 20  | 5 M 3  | 4 46                  |
| 2    | b    | h sou. 8.28 ves.                        | 22 46                    | 12 21                    | 4 49   | 5 10                  |
| 3    | c    | h sets 4.15 ma                          | 23 47                    | 24 26                    | 4 22   | 5 38                  |
| 4    | d    | ☿ sets 7.13 ves                         | 24 48                    | 6 $\text{=}$ 42          | 3 43   | 6 7                   |
| 5    | e    |   | 25 49                    | 19 12                    | 2 52   | 6 41                  |
| 6    | f    | Epiphany                                | 26 50                    | 1 m 58                   | 1 52   | 7 24                  |
| 7    | g    | Mars latet sub                          | 27 51                    | 15 7                     | 0 47   | 8 8                   |
| 8    | a    | Solis radiis.                           | 28 52                    | 28 43                    | 0 S 28 | 9 21                  |
| 9    | h    | ♀ sets 8.28 ves                         | 29 53                    | 12 $\text{f}$ 46         | 1 42   | 10 36                 |
| 10   | c    | h sou. 7.56 ves                         | 0 $\text{=}$ 54          | 27 21                    | 2 50   | 11 57                 |
| 11   | d    | h sets 3.38 ma                          | 1 55                     | 12 $\text{V}^{\circ}$ 19 | 3 45   | 1 A 22                |
| 12   | e    | ☿ sets 6.51 ves.                        | 2 56                     | 27 35                    | 4 34   | 2 32                  |
| 13   | f    | 1 past Epiph.                           | 3 57                     | 12 $\text{=}$ 56         | 4 57   | 3 29                  |
| 14   | g    | ♀ sets 8.42 ves                         | 4 58                     | 28 10                    | 5 00   | 4 15                  |
| 15   | a    | h sou. 7.35 ves                         | 5 59                     | 13 $\text{x}$ 9          | 4 42   | 4 32                  |
| 16   | b    | h sets 3.11 ma                          | 7 00                     | 27 40                    | 4 7    | 5 24                  |
| 17   | c    | ☿ sets 6.37 ves                         | 8 1                      | 11 $\text{V}$ 43         | 3 17   | 5 56                  |
| 18   | d    | ♀ sets 8.50 ves                         | 9 2                      | 25 16                    | 2 17   | 6 32                  |
| 19   | e    |   | 10 3                     | 8 $\text{o}$ 21          | 1 12   | 7 15                  |
| 20   | f    | 2 past Epiph.                           | 11 4                     | 21 2                     | 0 5    | 8 7                   |
| 21   | g    | h sou. 7.15 ves                         | 12 4                     | 3 $\text{II}$ 27         | 0 M 55 | 9 3                   |
| 22   | a    | h sets 2.50 ma                          | 13 5                     | 15 37                    | 1 56   | 10 9                  |
| 23   | b    | Term begins                             | 14 6                     | 27 40                    | 2 53   | 11 18                 |
| 24   | c    | ☿ sets 6.17 ves                         | 15 7                     | 9 $\text{o}$ 38          | 3 42   | 12 25                 |
| 25   | d    | Conr. St. Paul                          | 16 8                     | 21 31                    | 4 18   | 0 M 25                |
| 26   | e    | h sou. 6.17 ves                         | 17 8                     | 3 $\text{O}$ 26          | 4 45   | 1 26                  |
| 27   | f    |   | 18 9                     | 15 21                    | 4 58   | 2 20                  |
| 28   | g    | h sets 2.24 ma                          | 19 9                     | 27 21                    | 4 59   | 3 6                   |
| 29   | a    | ☿ sets 6.6 vesp.                        | 20 10                    | 9 $\text{M}$ 24          | 4 46   | 3 44                  |
| 30   | b    | K. CHARLS M.                            | 21 11                    | 21 31                    | 4 21   | 4 16                  |
| 31   | c    | ♀ sets 5.14 ves                         | 22 11                    | 3 $\text{=}$ 46          | 3 43   | 4 46                  |



|    | h | II    | M. | D.M. | z  | ≈  | M. | D.M. | δ  | vy | M. | D.M. |
|----|---|-------|----|------|----|----|----|------|----|----|----|------|
| 1  | 3 | 26    | 1  | 51   | 29 | 8  | 1  | 0    | 13 | 39 | 0  | 48   |
| 6  | 3 | 15    |    | 50   | 0  | ✕  | 14 | 0    | 17 | 30 |    | 50   |
| 11 | 3 | 06    |    | 49   | 1  | 21 |    | 0    | 21 | 21 |    | 52   |
| 16 | 3 | 01    |    | 48   | 2  | 30 | 0  | 58   | 25 | 14 |    | 54   |
| 21 | 2 | 58    |    | 46   | 3  | 39 |    | 58   | 29 | 8  |    | 56   |
| 26 | 2 | D. 58 |    | 45   | 4  | 50 |    | 58   | 3  | ≈  | 1  | 57   |

|    | ♀  | ✕ | M. | D.M. | ♀  | vy   | M.   | D.M. | Eq. Day | January, |
|----|----|---|----|------|----|------|------|------|---------|----------|
| 1  | 6  |   | 51 | 1 4  | 24 | 47   | 2--- | 4    | 8 52    | Add      |
| 2  | 7  |   | 59 | 0 0  | 26 | 27   |      | 5 9  | 14      |          |
| 3  | 9  |   | 07 | 0 56 | 28 | 8    |      | 5 9  | 36      |          |
| 4  | 10 |   | 14 | 0 52 | 29 | 49   |      | 5 9  | 58      |          |
| 5  | 11 |   | 22 | 48   | 1  | ≈ 31 |      | 4 10 | 19      |          |
| 6  | 12 |   | 30 | 44   | 3  | 13   |      | 3 10 | 38      |          |
| 7  | 13 |   | 37 | 39   | 4  | 56   |      | 2 10 | 58      |          |
| 8  | 14 |   | 44 | 35   | 6  | 39   | I-   | 59   | 11 17   |          |
| 9  | 15 |   | 51 | 30   | 8  | 22   |      | 57   | 11 35   |          |
| 10 | 16 |   | 57 | 26   | 10 | 5    |      | 54   | 11 52   |          |
| 11 | 18 |   | 3  | 21   | 11 | 49   |      | 50   | 12 9    |          |
| 12 | 19 |   | 10 | 16   | 13 | 32   |      | 46   | 12 26   |          |
| 13 | 20 |   | 15 | 11   | 15 | 15   |      | 41   | 12 40   |          |
| 14 | 21 |   | 21 | 6    | 16 | 58   |      | 35   | 12 53   |          |
| 15 | 22 |   | 26 | S 1  | 18 | 41   |      | 29   | 13 6    |          |
| 16 | 23 |   | 31 | 4    | 20 | 23   |      | 22   | 13 18   |          |
| 17 | 24 |   | 36 | 10   | 22 | 4    |      | 15   | 13 30   |          |
| 18 | 25 |   | 40 | 15   | 23 | 44   |      | 6    | 13 42   |          |
| 19 | 26 |   | 44 | 21   | 25 | 22   | 0-   | 57   | 13 51   |          |
| 20 | 27 |   | 48 | 26   | 26 | 58   |      | 47   | 13 59   |          |
| 21 | 28 |   | 51 | 32   | 28 | 31   |      | 36   | 14 08   |          |
| 22 | 29 |   | 54 | 38   | 0  | ✕ 2  |      | 25   | 14 16   |          |
| 23 | 0  | ✓ | 57 | 44   | 1  | 28   |      | 13   | 14 23   |          |
| 24 | 1  |   | 59 | 50   | 2  | 51   | S.   | 0    | 14 29   |          |
| 25 | 3  |   | 1  | 56   | 4  | 8    |      | 14   | 14 33   |          |
| 26 | 4  |   | 2  | I- 2 | 5  | 20   |      | 28   | 14 37   |          |
| 27 | 5  |   | 3  | 8    | 6  | 25   |      | 43   | 14 41   |          |
| 28 | 6  |   | 4  | 15   | 7  | 23   |      | 59   | 14 44   |          |
| 29 | 7  |   | 4  | 21   | 8  | 12   | I-   | 14   | 14 45   |          |
| 30 | 8  |   | 4  | 28   | 8  | 53   |      | 30   | 14 46   |          |
| 31 | 9  |   | 3  | 34   | 9  | 25   |      | 46   | 14 46   |          |

February hath xxviii. days.

Last quarter the 4. day, at 3. 25. afternoon.

New Moon the 11. day, at 6. 59. in the morning.

First quarter the 18. day, at 8. 3. in the morning.

Full Moon the 26. day, at 1. 1. afternoon.

| M.D. | Festivals & Plan.<br>Ris. Sou. and Ser. | ☉ Place         | ☽ Place        | ☾ Lat. | Full Sea<br>Lond. Br. |
|------|---|-----------------|----------------|--------|-----------------------|
| 1    | Q sets 7.28 ves                         | 23 $\approx$ 12 | 16 $\approx$ 9 | 2 M 51 | 5 11                  |
| 2    | Purif. Mary                             | 24 12           | 28 42          | 1 52   | 5 41                  |
| 3    | Sexagesima                              | 25 13           | 11 m 31        | 0 46   | 6 12                  |
| 4    | h sou. 6.15 ves                         | 26 13           | 24 35          | 0 S 17 | 6 51                  |
| 5    | h sets 1.53 ma                          | 27 14           | 8 $\uparrow$ 3 | 1 26   | 7 45                  |
| 6    | x sets 5.47 ves                         | 28 14           | 21 54          | 2 33   | 8 49                  |
| 7    | Q sets 9.32 ves                         | 29 15           | 6 $\wp$ 11     | 3 32   | 10 10                 |
| 8    | Q sets 5.50 ves                         | 0 $\times$ 15   | 20 55          | 4 20   | 11 40                 |
| 9    | h sou. 5.58 ves                         | 1 15            | 5 $\approx$ 58 | 4 50   | 1 A 00                |
| 10   | Quinquages.                             | 2 16            | 21 9           | 5 1    | 2 10                  |
| 11   | h sets 1.37 ma                          | 3 16            | 6 $\times$ 23  | 4 49   | 3 8                   |
| 12   | x sets 5.29 ves                         | 4 16            | 21 25          | 4 17   | 3 57                  |
| 13   | Ter. end. Ciné.                         | 5 16            | 6 $\vee$ 4     | 3 27   | 4 34                  |
| 14   | Valentine                               | 6 17            | 20 15          | 2 27   | 5 6                   |
| 15   | Q sets 9.43 ves                         | 7 17            | 3 $\oslash$ 56 | 1 20   | 5 38                  |
| 16   |   | 8 17            | 17 7           | 0 11   | 6 12                  |
| 17   | Quadragesima                            | 9 17            | 29 54          | 0 M 53 | 6 52                  |
| 18   | h sou. 5.17 ves                         | 10 17           | 12 II 19       | 1 55   | 7 40                  |
| 19   | h sets 1.2 ma                           | 11 17           | 24 29          | 2 52   | 8 35                  |
| 20   | x vesperi con-                          | 12 17           | 6 $\oslash$ 28 | 3 41   | 9 36                  |
| 21   | ditur sub radiis                        | 13 17           | 17 21          | 4 18   | 10 40                 |
| 22   | Solis.                                  | 14 17           | 0 $\Omega$ 13  | 4 46   | 11 46                 |
| 23   | Q sets 9.53 ves                         | 15 17           | 12 6           | 5 1    | 12 46                 |
| 24   | St. Matthias                            | 16 17           | 24 6           | 5 2    | 0 M 46                |
| 25   | h sets 0.42 ma                          | 17 17           | 6 $\wp$ 9      | 4 50   | 1 40                  |
| 26   | Q sets 9.56 ves                         | 18 17           | 18 20          | 4 24   | 2 29                  |
| 27   | Q revertitur in                         | 19 17           | 0 $\approx$ 40 | 3 44   | 3 13                  |
| 28   | suas latebras<br>sub Solem.             | 20 16           | 13 8           | 2 58   | 3 52                  |

|    | h  | II   | M.    | D.M. | ℥     | ×  | M.   | D.M. | ♂   | ≈         | M. | D.M. |
|----|----|------|-------|------|-------|----|------|------|-----|-----------|----|------|
| 1  | 3  | 3    | 1     | 43   | 6     | 16 | 0    | 58   | 7   | 43        | 0  | 59   |
| 6  | 3  | 9    |       | 42   | 7     | 28 |      | 58   | 11  | 38        | 1  | 00   |
| 11 | 3  | 19   |       | 40   | 8     | 40 |      | 59   | 15  | 33        |    | 2    |
| 16 | 3  | 30   |       | 39   | 9     | 53 |      | 59   | 19  | 28        |    | 3    |
| 21 | 3  | 45   |       | 38   | 11    | 5  |      | 59   | 23  | 24        |    | 4    |
| 26 | 4  | 2    |       | 37   | 12    | 18 |      | 59   | 27  | 19        |    | 4    |
|    | ♀  | VS.  | D.M.  | ♀    | ×     | S. | D.M. | Eq.  | Day | February. |    |      |
| 1  | 10 | 2    | 1-41  | 9    | 45    | 2  | 2    | 14   | 46  | Add       |    |      |
| 2  | 11 | 0    | 47    | 9    | 57    |    | 17   | 14   | 45  |           |    |      |
| 3  | 11 | 58   | 54    | 9    | 58    |    | 32   | 14   | 43  |           |    |      |
| 4  | 12 | 55   | 2---1 | 9    | R. 48 |    | 45   | 14   | 40  |           |    |      |
| 5  | 13 | 52   | 8     | 9    | 45    |    | 58   | 14   | 36  |           |    |      |
| 6  | 14 | 48   | 15    | 9    | 28    | 3  | 9    | 14   | 32  |           |    |      |
| 7  | 15 | 43   | 22    | 8    | 18    |    | 19   | 14   | 27  |           |    |      |
| 8  | 16 | 38   | 29    | 7    | 30    |    | 27   | 14   | 21  |           |    |      |
| 9  | 17 | 32   | 36    | 6    | 36    |    | 33   | 14   | 14  |           |    |      |
| 10 | 18 | 26   | 43    | 5    | 37    |    | 37   | 14   | 7   |           |    |      |
| 11 | 19 | 19   | 50    | 4    | 34    |    | 38   | 14   | 00  |           |    |      |
| 12 | 20 | 11   | 58    | 3    | 28    |    | 37   | 13   | 52  |           |    |      |
| 13 | 21 | 3    | 3---5 | 2    | 22    |    | 34   | 13   | 43  |           |    |      |
| 14 | 21 | 53   | 12    | 1    | 18    |    | 29   | 13   | 33  |           |    |      |
| 15 | 22 | 43   | 20    | 0    | 16    |    | 22   | 13   | 23  |           |    |      |
| 16 | 23 | 32   | 27    | 29   | ≈ 15  |    | 14   | 13   | 12  |           |    |      |
| 17 | 24 | 20   | 35    | 28   | 24    |    | 4    | 13   | 1   |           |    |      |
| 18 | 25 | 7    | 42    | 27   | 37    | 2  | 52   | 12   | 49  |           |    |      |
| 19 | 25 | 54   | 50    | 26   | 55    |    | 40   | 12   | 36  |           |    |      |
| 20 | 26 | 39   | 57    | 26   | 21    |    | 27   | 12   | 23  |           |    |      |
| 21 | 27 | 24   | 4---5 | 25   | 53    |    | 14   | 12   | 10  |           |    |      |
| 22 | 28 | 7    | 12    | 25   | 31    |    | 0    | 11   | 56  |           |    |      |
| 23 | 28 | 49   | 20    | 25   | 17    | 1  | 46   | 11   | 42  |           |    |      |
| 24 | 29 | 30   | 27    | 25   | 10    |    | 31   | 11   | 28  |           |    |      |
| 25 | 0  | ♂ 10 | 35    | 25   | 9     |    | 17   | 11   | 13  |           |    |      |
| 26 | 0  | 49   | 42    | 25   | D. 14 |    | 3    | 10   | 57  |           |    |      |
| 27 | 1  | 26   | 50    | 25   | 25    | 0  | 49   | 10   | 41  |           |    |      |
| 28 | 2  | 3    | 57    | 25   | 42    |    | 38   | 10   | 25  |           |    |      |



# March hath xxxi. days.

Last quarter the 6. day, at 1. 28. in the morning.

New Moon the 12. day, at 4. 51. afternoon.

First quarter the 20. day, at 2. 3. in the morning.

Full Moon the 28. day, at 3. 45. in the morning.

| M.D | W.D | Festivals & Plan.<br>Ris. Sou. and Set. | ☉ Place | ☽ Place | ☽ Lat. | Full Se.<br>Lond. Br. |
|-----|-----|---|---------|---------|--------|-----------------------|
| 1   | D   | h sets 0.27 ma                          | 21 16   | 25 45   | 2 M 0  | 4 26                  |
| 2   | E   | ♀ sets 9.57 ves                         | 22 16   | 8 m 32  | 0 54   | 4 57                  |
| 3   | F   | 3 Sund.in Lent                          | 23 16   | 21 32   | 0 S 21 | 5 27                  |
| 4   | G   | h sets 0.17 ma                          | 24 15   | 4 44    | 1 30   | 6 3                   |
| 5   | A   | ♀ sets 9.39 ves                         | 25 15   | 18 14   | 2 36   | 6 51                  |
| 6   | H   | Jupiter & Mars                          | 26 14   | 1 59    | 3 35   | 7 50                  |
| 7   | C   | latent sub Sole.                        | 27 14   | 16 4    | 4 23   | 8 56                  |
| 8   | D   | h sets 0.3 ma                           | 28 13   | 0 27    | 4 54   | 10 12                 |
| 9   | E   | ♀ sets 9.17 ves                         | 29 13   | 15 7    | 5 7    | 11 38                 |
| 10  | F   | Mid-Lent Sun                            | 0 V 12  | 29 56   | 5 1    | 12 39                 |
| 11  | G   | h sets 1.53 ves                         | 1 12    | 14 48   | 4 34   | 1 A 47                |
| 12  | A   | ♀ sets 8.5 ves                          | 2 11    | 29 35   | 3 48   | 2 44                  |
| 13  | H   | h sets 1.43 ves                         | 3 10    | 14 8    | 2 49   | 3 34                  |
| 14  | C   | ♀ sets 8.54 ves                         | 4 10    | 28 15   | 1 40   | 4 16                  |
| 15  | D   | h sets 1.39 ves                         | 5 9     | 11 59   | 0 29   | 4 51                  |
| 16  | E   | ♀ sets 8.43 ves                         | 6 8     | 25 15   | 0 M 40 | 5 23                  |
| 17  | F   | 5 Sund.in Lent                          | 7 7     | 8 II 5  | 1 48   | 5 56                  |
| 18  | G   | Mercurius licet in                      | 8 7     | 20 17   | 2 49   | 6 33                  |
| 19  | A   | Elongatione ma-                         | 9 6     | 2 48    | 3 40   | 7 18                  |
| 20  | H   | xima sit nobis in-                      | 10 5    | 14 47   | 4 21   | 8 12                  |
| 21  | C   | conspicuum, at in                       | 11 4    | 26 42   | 4 51   | 9 7                   |
| 22  | D   | Australi Hemis-                         | 12 3    | 8 34    | 5 8    | 10 7                  |
| 23  | E   | phario apparet                          | 13 2    | 20 25   | 5 12   | 11 8                  |
| 24  | F   | clarissime.                             | 14 1    | 2 m 26  | 5 1    | 12 8                  |
| 25  | G   | Palm-Sunday                             | 15 0    | 14 35   | 4 38   | 0 M 8                 |
| 26  | A   | Lady-Day                                | 15 59   | 26 53   | 4 2    | 1 4                   |
| 27  | H   | h sets 11.7 ves                         | 16 57   | 9 17    | 3 14   | 1 59                  |
| 28  | C   | ♀ sets 7.55 ves                         | 17 56   | 22 8    | 2 14   | 2 48                  |
| 29  | D   | h sets 11.2 ves                         | 18 55   | 5 m 5   | 1 7    | 3 33                  |
| 30  | E   | Good-Friday                             | 19 54   | 18 14   | 0 S 9  | 4 15                  |
| 31  | F   | Easter-Day                              | 20 53   | 1 36    | 1 22   | 4 50                  |

|    | h | II M. | D. M. | z  | x M. | D. M. | δ       | ≈ M.   | D. M. |    |
|----|---|-------|-------|----|------|-------|---------|--------|-------|----|
| 1  | 4 | 15    | 1 36  | 13 | 2    | 1 00  | 29      | 41     | 1     | 14 |
| 6  | 4 | 36    | 35    | 14 | 14   | 0     | 3       | x 36   |       | 5  |
| 11 | 4 | 59    | 33    | 15 | 26   | 0     | 7       | 31     |       | 5  |
| 16 | 5 | 24    | 32    | 16 | 37   | 1     | 11      | 26     |       | 5  |
| 21 | 5 | 51    | 31    | 17 | 47   | 1     | 15      | 20     |       | 5  |
| 26 | 6 | 19    | 30    | 18 | 55   | 2     | 19      | 14     |       | 5  |
|    | ♀ | ♂ S.  | D. M. | ♀  | ≈ S. | D. M. | Eq. Day | March. |       |    |
| 1  | 2 | 37    | 5---4 | 26 | 03   | 0 23  | 10      | 8      | PPV   |    |
| 2  | 3 | 11    | 12    | 26 | 30   | 10    | 9       | 51     |       |    |
| 3  | 3 | 43    | 19    | 27 | 2    | M. 2  | 9       | 34     |       |    |
| 4  | 4 | 13    | 26    | 27 | 37   | 1     | 14      | 9      |       |    |
| 5  | 4 | 42    | 33    | 28 | 17   | 25    | 9       | 00     |       |    |
| 6  | 5 | 09    | 40    | 29 | 1    | 36    | 8       | 42     |       |    |
| 7  | 5 | 35    | 47    | 29 | 48   | 46    | 8       | 24     |       |    |
| 8  | 5 | 59    | 54    | 0  | x 38 | 56    | 8       | 6      |       |    |
| 9  | 6 | 21    | 6---0 | 1  | 31   | 1     | 6       | 7      |       |    |
| 10 | 6 | 41    | 7     | 2  | 29   | 15    | 7       | 28     |       |    |
| 11 | 6 | 59    | 13    | 3  | 28   | 23    | 7       | 9      |       |    |
| 12 | 7 | 15    | 19    | 4  | 30   | 31    | 6       | 50     |       |    |
| 13 | 7 | 29    | 25    | 5  | 35   | 38    | 6       | 32     |       |    |
| 14 | 7 | 41    | 31    | 6  | 42   | 45    | 6       | 13     |       |    |
| 15 | 7 | 50    | 36    | 7  | 51   | 52    | 5       | 54     |       |    |
| 16 | 7 | 58    | 41    | 9  | 3    | 58    | 5       | 36     |       |    |
| 17 | 8 | 3     | 46    | 10 | 16   | 2     | 3       | 5      |       |    |
| 18 | 8 | 6     | 50    | 11 | 32   |       | 8       | 4      |       |    |
| 19 | 8 | 6     | 54    | 12 | 49   | 13    | 4       | 38     |       |    |
| 20 | 8 | R. 4  | 58    | 14 | 9    | 17    | 4       | 19     |       |    |
| 21 | 8 | 0     | 7---1 | 15 | 29   | 20    | 4       | 1      |       |    |
| 22 | 7 | 53    | 4     | 16 | 52   | 23    | 3       | 42     |       |    |
| 23 | 7 | 43    | 6     | 18 | 17   | 26    | 3       | 23     |       |    |
| 24 | 7 | 31    | 7     | 19 | 40   | 28    | 3       | 5      |       |    |
| 25 | 7 | 17    | 9     | 21 | 11   | 29    | 2       | 46     |       |    |
| 26 | 7 | 00    | 9     | 22 | 41   | 30    | 2       | 28     |       |    |
| 27 | 6 | 40    | 9     | 24 | 12   | 31    | 2       | 11     |       |    |
| 28 | 6 | 19    | 8     | 25 | 44   | 31    | 1       | 52     |       |    |
| 29 | 5 | 55    | 7     | 27 | 16   | 30    | 1       | 36     |       |    |
| 30 | 5 | 29    | 4     | 28 | 55   | 29    | 1       | 19     |       |    |
| 31 | 5 | 1     | 1     | 0  | 32   | 28    | 1       | 2      |       |    |

# April hath xxx. days.

Last quarter the 4. day, at 7.39. in the morning.  
 New Moon the 11. day, at 3. 26. in the morning,  
 First quarter the 18. day, at 8. 23. at night.  
 Full Moon the 26. day, at 4. 36. afternoon.

| M.D | W.D | Festivals & Plan.<br>Ris. Sou. and Set. | ☉ Place | ☽ Place | ☿ Lat. | Full Sea<br>Lond. Br. |
|-----|-----|---|---------|---------|--------|-----------------------|
| 1   | G   | h sets 10.41 ves                        | 51      | 26      | 15     | 25                    |
| 2   | a   | Jupiter & Mars                          | 22      | 50      | 28     | 01                    |
| 3   | b   | latent sub Sole.                        | 23      | 48      | 12     | 44                    |
| 4   | c   |   | 24      | 47      | 26     | 35                    |
| 5   | d   | h sets 10.29 ves                        | 25      | 46      | 10     | 36                    |
| 6   | e   |   | 26      | 44      | 25     | 46                    |
| 7   | f   | Low Sunday                              | 27      | 43      | 9      | 00                    |
| 8   | G   | h sets 10.20 ves                        | 28      | 42      | 24     | 12                    |
| 9   | a   | Venus in initio                         | 29      | 40      | 8      | 20                    |
| 10  | b   | mensis conditur                         | 0       | 38      | 22     | 21                    |
| 11  | c   | sub Solis radios                        | 1       | 37      | 6      | 14                    |
| 12  | d   |   | 2       | 35      | 19     | 2                     |
| 13  | e   |   | 3       | 33      | 3      | 39                    |
| 14  | f   | Miserer. Dom.                           | 4       | 32      | 16     | 13                    |
| 15  | G   | h sets 9.59 ves                         | 5       | 30      | 28     | 46                    |
| 16  | a   | h sets 9.56 ves                         | 6       | 28      | 10     | 58                    |
| 17  | b   | h sets 9.52 ves                         | 7       | 26      | 22     | 56                    |
| 18  | c   | Term begins                             | 8       | 25      | 4      | 38                    |
| 19  | d   | h sets 9.47                             | 9       | 23      | 16     | 28                    |
| 20  | e   | h sets 9.44                             | 10      | 21      | 28     | 21                    |
| 21  | f   | Jubilate                                | 11      | 19      | 10     | 22                    |
| 22  | G   |   | 12      | 17      | 22     | 23                    |
| 23  | a   | St. George.                             | 13      | 15      | 4      | 27                    |
| 24  | b   | h sets 9.36 ves                         | 14      | 13      | 17     | 27                    |
| 25  | c   | St. Mark Evan.                          | 15      | 11      | 0      | 24                    |
| 26  | d   | h sets 9.33 ves                         | 16      | 9       | 13     | 18                    |
| 27  | e   | h sets 9.30 ves                         | 17      | 7       | 27     | 9                     |
| 28  | f   | Cantate                                 | 18      | 5       | 11     | 59                    |
| 29  | G   | Mercurius Latet                         | 19      | 3       | 25     | 32                    |
| 30  | a   | sub Sole.                               | 20      | 1       | 8      | 7                     |



|    | h | II | M. | D.M. | z  | x  | M. | D.M. | δ | x  | M.  | D.M. |    |
|----|---|----|----|------|----|----|----|------|---|----|-----|------|----|
| 1  | 6 |    | 57 | 1    | 29 | 20 | 17 | 1    | 2 | 23 | 54  | 1    | 4  |
| 6  | 7 |    | 29 |      | 28 | 21 | 23 |      | 3 | 27 | 46  |      | 3  |
| 11 | 8 |    | 03 |      | 27 | 22 | 28 |      | 4 | 1  | ✓38 |      | 2  |
| 16 | 8 |    | 37 |      | 27 | 23 | 31 |      | 4 | 5  | 29  |      | 1  |
| 21 | 9 |    | 13 |      | 26 | 24 | 32 |      | 5 | 9  | 19  |      | 0  |
| 26 | 9 |    | 50 |      | 25 | 25 | 31 |      | 6 | 13 | 8   | 0    | 58 |

|    | ♀  | ♂ | S. | D.M. | ♀  | ♂  | M. | D.M. | Eq. | Day | April. |                 |   |
|----|----|---|----|------|----|----|----|------|-----|-----|--------|-----------------|---|
| 1  | 4  |   | 31 | 6-57 | 2  |    | 11 | 2    | 26  | 0   | 46     | Add<br>Subtract |   |
| 2  | 3  |   | 59 | 53   | 3  |    | 52 |      | 24  | 0   | 30     |                 |   |
| 3  | 3  |   | 26 | 47   | 5  |    | 34 |      | 21  | 0   | 14     |                 |   |
| 4  | 2  |   | 51 | 41   | 7  |    | 18 |      | 17  | 0   | *      |                 | 1 |
| 5  | 2  |   | 16 | 34   | 9  |    | 3  |      | 13  | 0   | 17     |                 |   |
| 6  | 1  |   | 38 | 27   | 10 |    | 50 |      | 9   | 0   | 32     |                 |   |
| 7  | 1  |   | 1  | 18   | 12 |    | 39 |      | 4   | 0   | 46     |                 |   |
| 8  | 0  |   | 23 | 9    | 14 |    | 32 | 1    | 59  | 1   | 00     |                 |   |
| 9  | 29 | ✓ | 45 | 5-   | 59 | 16 | 29 |      | 53  | 1   | 14     |                 |   |
| 10 | 29 |   | 7  | 48   | 18 |    | 15 |      | 47  | 1   | 28     |                 |   |
| 11 | 28 |   | 29 | 37   | 20 |    | 10 |      | 40  | 1   | 40     |                 |   |
| 12 | 27 |   | 51 | 25   | 22 |    | 8  |      | 32  | 1   | 52     |                 |   |
| 13 | 27 |   | 15 | 13   | 24 |    | 6  |      | 25  | 2   | 01     |                 |   |
| 14 | 26 |   | 39 | 0    | 26 |    | 7  |      | 16  | 2   | 16     |                 |   |
| 15 | 26 |   | 4  | 4    | 47 | 28 | 8  |      | 8   | 2   | 27     |                 |   |
| 16 | 25 |   | 32 | 33   | 0  | ♂  | 11 | 0    | 59  | 2   | 37     |                 |   |
| 17 | 25 |   | 1  | 20   | 2  |    | 16 |      | 49  | 2   | 47     |                 |   |
| 18 | 24 |   | 31 | 6    | 4  |    | 22 |      | 40  | 2   | 57     |                 |   |
| 19 | 24 |   | 3  | 3    | 51 | 6  | 29 |      | 30  | 3   | 6      |                 |   |
| 20 | 23 |   | 38 | 37   | 8  |    | 37 |      | 20  | 3   | 15     |                 |   |
| 21 | 23 |   | 14 | 23   | 10 |    | 47 |      | 10  | 3   | 23     |                 |   |
| 22 | 22 |   | 53 | 8    | 12 |    | 57 | S.   | 1   | 3   | 30     |                 |   |
| 23 | 22 |   | 34 | 2    | 54 | 15 | 7  |      | 11  | 3   | 37     |                 |   |
| 24 | 22 |   | 18 | 40   | 17 |    | 18 |      | 21  | 3   | 43     |                 |   |
| 25 | 22 |   | 4  | 26   | 19 |    | 28 |      | 32  | 3   | 49     |                 |   |
| 26 | 21 |   | 52 | 12   | 21 |    | 38 |      | 42  | 3   | 54     |                 |   |
| 27 | 21 |   | 43 | 1    | 58 | 23 | 48 |      | 52  | 3   | 58     |                 |   |
| 28 | 21 |   | 36 | 45   | 25 |    | 57 | 1    | 2   | 4   | 2      |                 |   |
| 29 | 21 |   | 32 | 32   | 28 |    | 4  |      | 2   | 4   | 6      |                 |   |
| 30 | 21 |   | 29 | 19   | 0  | II | 10 |      | 20  | 4   | 8      |                 |   |

# May hath xxxi. days.

Last quarter the 3. day, at 2. 1. afternoon.

New Moon the 10. day, at 2. 57. afternoon.

First quarter the 18. day, at 2. 5. afternoon.

Full Moon the 26. day, at 2. 49. in the morning.

| M.D. | W.D. | Festivals & Plan.<br>Ris. Sou. and Set. | ☉ Place | ☽ Place  | ☽ Lat. | Full Sea<br>Lond. Br. |
|------|------|---|---------|----------|--------|-----------------------|
| 1    | b    | S. Phil. & Jac.                         | 20 8 58 | 23 7 29  | 4 S 50 | 5 44                  |
| 2    | c    | Saturnus, Jupi-                         | 21 56   | 7 40     | 5 14   | 6 25                  |
| 3    | d    | ter & Mars la-                          | 22 54   | 21 52    | 5 17   | 7 15                  |
| 4    | e    | tent. Sub Sole.                         | 23 52   | 5 59     | 5 00   | 8 14                  |
| 5    | f    | Rogat. Sund.                            | 24 50   | 20 34    | 4 25   | 9 18                  |
| 6    | g    | Venus posteriore                        | 25 47   | 4 13     | 3 36   | 10 31                 |
| 7    | a    | parte in enses rur-                     | 26 45   | 17 50    | 2 33   | 11 43                 |
| 8    | b    | sum Emergit,                            | 27 43   | 1 29     | 1 23   | 12 53                 |
| 9    | c    | Holy Thursd.                            | 28 40   | 14 57    | 0 8    | 1 57                  |
| 10   | d    | & fit Lucifer.                          | 29 38   | 28 13    | 1 M 00 | 2 53                  |
| 11   | e    |   | 0 II 36 | 11 II 13 | 2 08   | 3 40                  |
| 12   | f    | Exaudi                                  | 1 33    | 23 57    | 3 09   | 4 20                  |
| 13   | g    | Term Ends                               | 2 31    | 6 25     | 4 00   | 4 54                  |
| 14   | a    | ♀ in fine men-                          | 3 28    | 18 41    | 4 38   | 5 25                  |
| 15   | b    | sis emergit è So-                       | 4 26    | 0 44     | 5 3    | 5 56                  |
| 16   | c    | lis radiis.                             | 5 24    | 12 40    | 5 15   | 6 31                  |
| 17   | d    |   | 6 21    | 24 33    | 5 13   | 7 12                  |
| 18   | e    |   | 7 16    | 6 25     | 4 58   | 7 59                  |
| 19   | f    | Whitsunday                              | 8 16    | 18 20    | 4 30   | 8 53                  |
| 20   | g    | ☿ rise 2.22 ma                          | 9 13    | 0 27     | 3 50   | 9 54                  |
| 21   | a    | ♀ rise 2.29 ma                          | 10 11   | 12 50    | 2 59   | 10 56                 |
| 22   | b    | ☿ sets 10.5 ves                         | 11 8    | 25 29    | 1 57   | 12 2                  |
| 23   | c    | ☿ rise 1.26 ma                          | 12 6    | 8 33     | 0 48   | 0 M 2                 |
| 24   | d    | ♀ rise 1.53 ma                          | 13 3    | 22 00    | 32 1   | 3                     |
| 25   | e    | ☿ sets 9.58 ves                         | 14 1    | 5 50     | 1 46   | 2 2                   |
| 26   | f    | Trinity Sund.                           | 14 58   | 20 42    | 2 54   | 2 54                  |
| 27   | g    | ☿ sets 9.55 ves                         | 15 55   | 4 31     | 3 54   | 3 44                  |
| 28   | a    |   | 16 53   | 19 7     | 4 38   | 4 28                  |
| 29   | b    | K. Ch. II. N.R.                         | 17 50   | 3 45     | 5 5    | 5 11                  |
| 30   | c    | Corpus Christi                          | 18 47   | 19 18    | 5 12   | 5 46                  |
| 31   | d    | Term begins                             | 19 45   | 2 42     | 5 00   | 6 22                  |

| h II M. D.M. |       |      | x x M. D.M.  |    |    | δ v M. D.M. |    |              |
|--------------|-------|------|--------------|----|----|-------------|----|--------------|
| 1            | 10    | 28   | 1            | 25 | 26 | 28          | 1  | 7 16 55 0 56 |
| 6            | 11    | 6    |              | 24 | 27 | 23          |    | 8 20 42 55   |
| 11           | 11    | 45   |              | 24 | 28 | 15          |    | 9 24 27 53   |
| 16           | 12    | 23   |              | 23 | 29 | 4           |    | 10 28 11 50  |
| 21           | 13    | 3    |              | 23 | 29 | 51          |    | 11 1 54 48   |
| 26           | 13    | 42   |              | 22 | 0  | v 34        |    | 13 5 35 45   |
| ♀ v S. D.M.  |       |      | ♀ II S. D.M. |    |    | Eq. Day     |    |              |
| 1            | 21 D. | 30   | 1            | 6  | 2  | 14          | 1  | 28 4 12      |
| 2            | 21    | 33   | 0            | 54 | 4  | 16          |    | 36 4 14      |
| 3            | 21    | 38   |              | 42 | 6  | 16          |    | 43 4 14      |
| 4            | 21    | 45   |              | 31 | 8  | 14          |    | 49 4 14      |
| 5            | 21    | 54   |              | 19 | 10 | 9           |    | 54 4 14      |
| 6            | 22    | 6    |              | 9  | 12 | 1           |    | 59 4 13      |
| 7            | 22    | 20   | M.           | 2  | 13 | 50          |    | 2 4 12       |
| 8            | 22    | 35   |              | 13 | 15 | 36          | 2  | 5 4 10       |
| 9            | 22    | 52   |              | 23 | 17 | 19          |    | 7 4 8        |
| 10           | 23    | 12   |              | 32 | 18 | 59          | 10 | 4 5          |
| 11           | 23    | 33   |              | 41 | 20 | 35          | 12 | 4 2          |
| 12           | 23    | 56   |              | 50 | 22 | 11          | 12 | 3 58         |
| 13           | 24    | 21   |              | 59 | 23 | 41          | 12 | 3 54         |
| 14           | 24    | 47   | 1            | 7  | 25 | 8           | 10 | 3 48         |
| 15           | 25    | 15   |              | 15 | 26 | 32          | 8  | 3 43         |
| 16           | 25    | 44   |              | 22 | 27 | 53          |    | 4 3 37       |
| 17           | 26    | 15   |              | 29 | 29 | 11          |    | 0 3 30       |
| 18           | 26    | 47   |              | 38 | 0  | 24          | 1  | 56 3 23      |
| 19           | 27    | 21   |              | 44 | 1  | 35          |    | 50 3 15      |
| 20           | 27    | 55   |              | 50 | 2  | 42          |    | 43 3 7       |
| 21           | 28    | 31   |              | 56 | 3  | 45          |    | 36 2 59      |
| 22           | 29    | 9    | 2            | 2  | 4  | 45          |    | 28 2 51      |
| 23           | 29    | 47   |              | 7  | 5  | 41          |    | 19 2 43      |
| 24           | 9     | 8 27 |              | 13 | 6  | 33          |    | 10 2 33      |
| 25           | 1     | 7    |              | 18 | 7  | 22          | 0  | 59 2 22      |
| 26           | 1     | 49   |              | 22 | 8  | 6           |    | 48 2 10      |
| 27           | 2     | 31   |              | 27 | 8  | 46          |    | 36 1 58      |
| 28           | 3     | 15   |              | 31 | 10 | 41          |    | 25 1 46      |
| 29           | 3     | 59   |              | 35 | 11 | 5           |    | 12 1 34      |
| 30           | 4     | 44   |              | 39 | 10 | 22          | M. | 3 1 24       |
| 31           | 5     | 30   |              | 42 | 10 | 46          |    | 17 1 13      |

Subtraß

May.



# June hath xxx. days.

Last quarter the 1. day, at 7. 9. afternoon.

New Moon the 9. day, at 3. 42. in the morning.

First quarter the 17. day, at 6. 18. in the morning.

Full Moon the 24. day, at 11. 4. in the morning.

| M.D. | W.D. | Festivals & Plan.<br>Rises, Sets, and Set. | ☉ Place  | ☽ Place | ☿ Lat. | Full Sea<br>Lond. Br. |
|------|------|--|----------|---------|--------|-----------------------|
| 1    | e    |  | 20 II 42 | 16 X 53 | 4 S 28 | 7 M 4                 |
| 2    | f    | 1 past Trinity                             | 21 39    | 0 V 45  | 3 43   | 7 53                  |
| 3    | g    | Saturnus latet                             | 22 36    | 14 27   | 2 44   | 8 49                  |
| 4    | a    | sub Sole.                                  | 23 34    | 27 35   | 1 37   | 9 54                  |
| 5    | b    | ☿ rise 0.36 ma                             | 24 31    | 11 8    | 0 26   | 11 4                  |
| 6    | c    | ♂ rise 1.44 ma                             | 25 28    | 24 14   | 0 M 40 | 12 14                 |
| 7    | d    | ♀ rise 1.42 ma                             | 26 25    | 7 II 6  | 1 47   | 1 A 22                |
| 8    | e    | Mercurius latet                            | 27 23    | 19 48   | 2 48   | 2 23                  |
| 9    | f    | 2 past Trinity                             | 28 20    | 2 20    | 3 41   | 3 16                  |
| 10   | g    | sub Solis radios                           | 29 17    | 14 39   | 4 22   | 4 0                   |
| 11   | a    | St. Barnabas                               | 0 14     | 26 51   | 4 51   | 4 34                  |
| 12   | b    | Term ends                                  | 1 12     | 8 53    | 5 6    | 5 4                   |
| 13   | c    | ☿ rise 12.0 noc                            | 2 9      | 20 51   | 5 7    | 5 28                  |
| 14   | d    | ♂ rise 1.18 ma                             | 3 6      | 2 m 43  | 4 55   | 5 55                  |
| 15   | e    | ♀ rise 1.33 ma                             | 4 3      | 14 35   | 4 31   | 6 26                  |
| 16   | f    | 3 past Trinity                             | 5 1      | 26 31   | 3 55   | 7 3                   |
| 17   | g    | ☿ rise 11.43 ves                           | 5 58     | 8 35    | 3 7    | 7 46                  |
| 18   | a    | ♂ rise 1.5 ma                              | 6 55     | 20 52   | 2 12   | 8 35                  |
| 19   | b    | ♀ rise 1.28 ma                             | 7 52     | 3 m 30  | 1 7    | 9 32                  |
| 20   | c    | ☿ rise 11.31 ves                           | 8 49     | 16 30   | 0 S 8  | 10 40                 |
| 21   | d    | ♂ rise 0.55 ma                             | 9 47     | 29 59   | 1 20   | 11 57                 |
| 22   | e    | ♀ rise 1.24 ma                             | 10 44    | 13 56   | 2 29   | 1 15                  |
| 23   | f    | 4 past Trinity                             | 11 41    | 28 19   | 3 30   | 0 M 15                |
| 24   | g    | St. John Bapt.                             | 12 38    | 13 8    | 4 19   | 2 31                  |
| 25   | a    | ☿ rise 11.11 ves                           | 13 36    | 28 8    | 4 51   | 3 29                  |
| 26   | b    | ♂ rise 0.38 ma                             | 14 33    | 13 13   | 5 4    | 4 16                  |
| 27   | c    | ♀ rise 1.18 ma                             | 15 30    | 28 11   | 4 56   | 4 52                  |
| 28   | d    |  | 16 27    | 12 X 50 | 4 24   | 5 25                  |
| 29   | e    | S. Peter & Paul                            | 17 24    | 27 13   | 3 43   | 5 56                  |
| 30   | f    | 5 past Trinity                             | 18 22    | 11 V 13 | 2 46   | 6 35                  |

|    | h  | II | M. | D.M. | z | v  | M. | D.M. | δ  | 8  | M. | D.M. |
|----|----|----|----|------|---|----|----|------|----|----|----|------|
| 1  | 14 | 29 | 1  | 22   | 1 | 22 | 1  | 14   | 9  | 59 | 0  | 42   |
| 6  | 15 | 8  |    | 22   | 1 | 47 |    | 15   | 13 | 36 |    | 39   |
| 11 | 15 | 46 |    | 21   | 2 | 29 |    | 17   | 17 | 13 |    | 36   |
| 16 | 16 | 24 |    | 21   | 2 | 56 |    | 18   | 29 | 47 |    | 33   |
| 21 | 17 | 2  |    | 21   | 3 | 20 |    | 20   | 24 | 23 |    | 29   |
| 26 | 17 | 39 |    | 21   | 3 | 38 |    | 21   | 27 | 52 |    | 26   |

|    | ♀  | 8  | S. | D.M. | ♀  | 8     | M. | D.M. | Eq. | Day | June.           |
|----|----|----|----|------|----|-------|----|------|-----|-----|-----------------|
| 1  | 6  | 17 | 2  | 46   | 11 | 5     | 0  | 32   | 1   | 2   | Subtract<br>Add |
| 2  | 7  | 5  |    | 49   | 11 | 19    |    | 47   | 0   | 49  |                 |
| 3  | 7  | 53 |    | 51   | 11 | 29    | 1  | 3    | 0   | 36  |                 |
| 4  | 8  | 42 |    | 54   | 11 | 34    |    | 19   | 0   | 24  |                 |
| 5  | 9  | 32 |    | 56   | 11 | 35    |    | 35   | 0   | 12  |                 |
| 6  | 10 | 23 |    | 59   | 11 | R. 31 |    | 51   | 0   | *   |                 |
| 7  | 11 | 14 | 3  | 1    | 11 | 23    | 2  | 8    | 0   | 14  |                 |
| 8  | 12 | 6  |    | 3    | 11 | 11    |    | 24   | 0   | 27  |                 |
| 9  | 12 | 58 |    | 4    | 10 | 54    |    | 40   | 0   | 40  |                 |
| 10 | 13 | 51 |    | 6    | 10 | 34    |    | 56   | 0   | 53  |                 |
| 11 | 14 | 45 |    | 7    | 10 | 10    | 3  | 11   | 1   | 7   |                 |
| 12 | 15 | 39 |    | 8    | 9  | 43    |    | 26   | 1   | 20  |                 |
| 13 | 16 | 33 |    | 9    | 9  | 14    |    | 39   | 1   | 33  |                 |
| 14 | 17 | 28 |    | 10   | 8  | 41    |    | 52   | 1   | 46  |                 |
| 15 | 18 | 24 |    | 10   | 8  | 7     | 4  | 4    | 1   | 58  |                 |
| 16 | 19 | 20 |    | 11   | 7  | 32    |    | 15   | 2   | 11  |                 |
| 17 | 20 | 16 |    | 11   | 6  | 57    |    | 24   | 2   | 23  |                 |
| 18 | 21 | 13 |    | 11   | 6  | 20    |    | 32   | 2   | 36  |                 |
| 19 | 22 | 10 |    | 11   | 5  | 45    |    | 39   | 2   | 49  |                 |
| 20 | 23 | 8  |    | 11   | 5  | 10    |    | 44   | 3   | 1   |                 |
| 21 | 24 | 6  |    | 11   | 4  | 38    |    | 47   | 3   | 12  |                 |
| 22 | 25 | 5  |    | 10   | 4  | 7     |    | 49   | 3   | 23  |                 |
| 23 | 26 | 4  |    | 10   | 3  | 40    |    | 49   | 3   | 34  |                 |
| 24 | 27 | 3  |    | 9    | 3  | 15    |    | 48   | 3   | 45  |                 |
| 25 | 28 | 2  |    | 8    | 2  | 55    |    | 45   | 3   | 55  |                 |
| 26 | 29 | 2  |    | 7    | 2  | 39    |    | 41   | 4   | 6   |                 |
| 27 | 0  | II | 3  | 6    | 2  | 27    |    | 36   | 4   | 16  |                 |
| 28 | 1  |    | 3  | 5    | 2  | 20    |    | 29   | 4   | 25  |                 |
| 29 | 2  |    | 4  | 4    | 2  | 18    |    | 21   | 4   | 34  |                 |
| 30 | 3  |    | 5  | 2    | 2  | Di 21 |    | 12   | 4   | 43  |                 |

# July hath xxxi. days.

Last quarter the 1. day, at 1. 26. in the morning.

New Moon the 8. day, at 5. 35. afternoon.

First quarter the 16. day, at 8. 36. afternoon.

Full Moon the 23. day, at 6. 5. afternoon.

Last quarter the 30. day, at 10. 3. in the morning.

| M.D. | Festivals & Plan.<br>Ris. Sou. and Set. | ☉ Place | ☽ Place | ☿ Lat. | Full Sea<br>Lond. Br. |
|------|---|---------|---------|--------|-----------------------|
| 1    | h rise 1.45 ma                          | 19 19   | 24 V 48 | 1 S 40 | 7 21                  |
| 2    | ☿ rise 10.47 ves                        | 20 16   | 8 ♀ 4   | 0 31   | 8 13                  |
| 3    | ♂ rise 0.43 ma                          | 21 13   | 21 6    | 0 M 32 | 9 4                   |
| 4    | ♀ rise 1.12 ma                          | 22 11   | 3 II 52 | 1 38   | 10 0                  |
| 5    |   | 23 8    | 16 28   | 2 38   | 11 2                  |
| 6    |   | 24 5    | 28 52   | 3 31   | 12 10                 |
| 7    | 6 past Trinity                          | 25 3    | 11 ☾ 9  | 4 12   | 1 A 20                |
| 8    | h rise 1.18 ma                          | 26 0    | 23 19   | 4 41   | 2 27                  |
| 9    | ☿ rise 10.15 ves                        | 26 57   | 5 ♀ 25  | 4 58   | 3 22                  |
| 10   | ♂ rise 0.26 ma                          | 27 55   | 17 24   | 5 01   | 4 6                   |
| 11   | ♀ rise 0.59 ma                          | 28 52   | 29 19   | 4 50   | 4 40                  |
| 12   |   | 29 49   | 11 m 12 | 4 28   | 5 8                   |
| 13   |   | 0 50    | 47 23   | 3 54   | 5 31                  |
| 14   | 7 past Trinity                          | 1 44    | 5 ☽ 3   | 3 9    | 5 58                  |
| 15   | St. Swithin                             | 2 41    | 17 7    | 2 15   | 6 33                  |
| 16   | h rise 0.53 ma                          | 3 39    | 29 23   | 1 14   | 7 14                  |
| 17   | ☿ rise 9.45 ves                         | 4 36    | 11 m 57 | 0 S 8  | 8 5                   |
| 18   | ☿ sou. 3.46 ma                          | 5 34    | 24 52   | 1 6    | 9 2                   |
| 19   | ♂ rise 0.7. ma                          | 6 31    | 8 ♀ 15  | 2 12   | 10 14                 |
| 20   | ♀ rise 1.3 ma                           | 7 29    | 22 8    | 3 13   | 11 23                 |
| 21   | 8 past Trinity                          | 8 26    | 6 ♀ 31  | 4 5    | 12 38                 |
| 22   | h rise 0.30 ma                          | 9 23    | 21 23   | 4 41   | 0 M 38                |
| 23   | ☿ rise 9.20 ves                         | 10 21   | 6 ☽ 34  | 4 58   | 1 53                  |
| 24   | ☿ sou. 3.25 ma                          | 11 19   | 21 54   | 4 56   | 3 4                   |
| 25   | St. James                               | 12 16   | 7 ☿ 9   | 4 31   | 3 58                  |
| 26   | ♂ rise 11.55 ves                        | 13 14   | 22 10   | 3 51   | 4 37                  |
| 27   | ♀ rise 1.6 ma                           | 14 11   | 6 V 46  | 2 56   | 5 12                  |
| 28   | 9 past Trinity                          | 15 9    | 20 57   | 1 44   | 5 45                  |
| 29   |   | 16 6    | 4 ♀ 39  | 0 34   | 6 19                  |
| 30   |   | 17 4    | 17 56   | 0 30   | 7 3                   |
| 31   |   | 18 2    | 0 II 51 | 1 M 37 | 7 53                  |



|    | h  | II | M. | D.M. | z | v  | M. | D.M. | δ  | II | M. | D.M. |
|----|----|----|----|------|---|----|----|------|----|----|----|------|
| 1  | 18 | 14 | 1  | 21   | 3 |    | 54 | 1    | 23 | 1  | 21 | 0 22 |
| 6  | 18 | 49 |    | 21   | 4 |    | 3  | 24   | 4  | 49 |    | 19   |
| 11 | 19 | 23 |    | 21   | 4 |    | 8  | 25   | 8  | 14 |    | 15   |
| 16 | 19 | 56 |    | 21   | 4 | R. | 8  | 27   | 11 | 38 |    | 11   |
| 21 | 20 | 27 |    | 21   | 4 |    | 2  | 28   | 15 | 00 |    | 7    |
| 26 | 20 | 56 |    | 22   | 3 |    | 53 | 30   | 18 | 19 |    | 2    |

|    | ♀  | II | M. | D. M. | ♀  | ♂  | M. | D. M. | Eq. | Day  | July. |               |
|----|----|----|----|-------|----|----|----|-------|-----|------|-------|---------------|
| 1  | 4  |    | 7  | 3     | 1  | 2  |    | 29    | 4   | 2 4  | 52    | Add           |
| 2  | 5  |    | 9  | 2     | 59 | 2  |    | 43    | 3   | 52 4 | 59    |               |
| 3  | 6  |    | 11 |       | 58 | 3  |    | 2     | 40  | 5    | 6     |               |
| 4  | 7  |    | 17 |       | 56 | 3  |    | 27    | 28  | 5    | 13    |               |
| 5  | 8  |    | 16 |       | 54 | 3  |    | 57    | 15  | 5    | 20    |               |
| 6  | 9  |    | 18 |       | 52 | 4  |    | 33    | 2   | 5    | 27    |               |
| 7  | 10 |    | 21 |       | 50 | 5  |    | 14    | 2   | 48 5 | 33    |               |
| 8  | 11 |    | 25 |       | 48 | 6  |    | 0     | 34  | 5    | 37    |               |
| 9  | 12 |    | 28 |       | 45 | 6  |    | 52    | 20  | 5    | 41    |               |
| 10 | 13 |    | 32 |       | 43 | 7  |    | 49    |     | 5 5  | 44    |               |
| 11 | 14 |    | 36 |       | 41 | 8  |    | 52    | 1   | 51 5 | 48    |               |
| 12 | 15 |    | 41 |       | 38 | 10 |    | 00    |     | 36 5 | 51    |               |
| 13 | 16 |    | 45 |       | 35 | 11 |    | 12    |     | 21 5 | 54    |               |
| 14 | 17 |    | 50 |       | 33 | 12 |    | 30    |     | 7 5  | 55    |               |
| 15 | 18 |    | 55 |       | 30 | 13 |    | 52    | 0   | 53 5 | 57    |               |
| 16 | 20 |    | 00 |       | 27 | 15 |    | 19    |     | 39 5 | 56    |               |
| 17 | 21 |    | 5  |       | 24 | 16 |    | 51    |     | 55 5 | 56    |               |
| 18 | 22 |    | 10 |       | 21 | 18 |    | 27    |     | 12 5 | 55    | Dog days beg. |
| 19 | 23 |    | 16 |       | 19 | 20 |    | 7     | S.  | 1 5  | 54    |               |
| 20 | 24 |    | 22 |       | 15 | 21 |    | 51    |     | 13 5 | 52    |               |
| 21 | 25 |    | 28 |       | 12 | 23 |    | 39    |     | 25 5 | 50    |               |
| 22 | 26 |    | 34 |       | 9  | 25 |    | 29    |     | 36 5 | 47    |               |
| 23 | 27 |    | 41 |       | 6  | 27 |    | 23    |     | 46 5 | 43    |               |
| 24 | 28 |    | 47 |       | 3  | 29 |    | 19    |     | 56 5 | 39    |               |
| 25 | 29 |    | 54 |       | 0  | 1  | ♂  | 18    | 1   | 4 5  | 34    |               |
| 26 | 1  | ♂  | 1  | 1     | 56 | 3  |    | 18    |     | 12 5 | 28    |               |
| 27 | 2  |    | 8  |       | 53 | 5  |    | 20    |     | 18 5 | 22    |               |
| 28 | 3  |    | 15 |       | 49 | 7  |    | 22    |     | 24 5 | 15    |               |
| 29 | 4  |    | 22 |       | 46 | 9  |    | 25    |     | 30 5 | 7     |               |
| 30 | 5  |    | 30 |       | 43 | 11 |    | 29    |     | 34 4 | 59    |               |
| 31 | 6  |    | 37 |       | 39 | 13 |    | 33    |     | 37 4 | 51    |               |

# August hath xxxi. days.

New Moon the 7. day, at 8. 36. in the morning.

First quarter the 15. day, at 8. 47. in the morning.

Full Moon the 22. day, at 1. 14. in the morning.

Last quarter the 28. day, at 9. 58. in the evening.

| M.D. | W.D. | Festivals & Plan.<br>Ris. Sou. and Set. | ☉ Place | ☽ Place  | ☿ Lat. | Full Sea<br>Lond. Br. |
|------|------|---|---------|----------|--------|-----------------------|
| 1    | C    | Peter ad vinc.                          | 18 Ω 59 | 13 II 29 | 2 M 37 | 8 49                  |
| 2    | D    | ☿ rise 11.45 ves                        | 19 57   | 25 53    | 3 30   | 9 54                  |
| 3    | E    | ☿ rise 8.39 ves                         | 20 55   | 8 ☾ 7    | 4 11   | 11 2                  |
| 4    | F    | ☿ 10 past Trin.                         | 21 53   | 20 15    | 4 40   | 12 10                 |
| 5    | G    | ☿ sou. 2.38 ma                          | 22 50   | 2 Ω 16   | 4 57   | 1 A 15                |
| 6    | a    | ♂ rise 11.41 ves                        | 23 48   | 14 15    | 5 00   | 2 11                  |
| 7    | b    | ♀ rise 1.16 ma                          | 24 46   | 26 11    | 4 50   | 3 1                   |
| 8    | c    | Mercurius latet                         | 25 44   | 8 ♄ 6    | 4 28   | 3 41                  |
| 9    | d    | sub Sole.                               | 26 42   | 20 2     | 3 53   | 4 13                  |
| 10   | e    |   | 27 40   | 1 ☿ 58   | 3 9    | 4 44                  |
| 11   | f    | ☿ 11 past Trin.                         | 28 38   | 14 00    | 2 17   | 5 12                  |
| 12   | g    | ☿ rise 10.58 ves                        | 29 35   | 26 09    | 1 16   | 5 38                  |
| 13   | a    | ☿ rise 7.57 ves                         | 0 m 33  | 8 m 28   | 0 11   | 6 9                   |
| 14   | b    | ☿ sou. 1.53 ma                          | 1 31    | 21 3     | 1 S 01 | 6 46                  |
| 15   | c    | ♂ rise 11.29 ves                        | 2 29    | 3 ♄ 56   | 2 7    | 7 32                  |
| 16   | d    | ♀ rise 1.36 ma                          | 3 27    | 17 12    | 3 7    | 8 30                  |
| 17   | e    |   | 4 25    | 0 ♄ 56   | 3 58   | 9 40                  |
| 18   | f    | ☿ 12 past Trin.                         | 5 24    | 15 11    | 4 37   | 11 1                  |
| 19   | g    | ☿ rise 10.47 ves                        | 6 22    | 29 50    | 4 59   | 12 24                 |
| 20   | a    | ☿ rise 7.29 ves                         | 7 20    | 14 ☿ 57  | 5 20   | M 24                  |
| 21   | b    | ♂ sou. 1.25 ma                          | 8 18    | 0 ♄ 13   | 4 43   | 1 46                  |
| 22   | c    | ♂ rise 11.21 ves                        | 9 16    | 15 33    | 4 5    | 2 49                  |
| 23   | d    | ♀ rise 1.52 ma                          | 10 14   | 0 ♄ 41   | 3 8    | 3 41                  |
| 24   | e    | St. Bartholom.                          | 11 13   | 15 30    | 1 59   | 4 19                  |
| 25   | f    | ☿ 13 past Trin.                         | 12 11   | 29 53    | 0 46   | 4 59                  |
| 26   | g    | ☿ rise 10.27 ves                        | 13 9    | 13 ☽ 47  | 0 M 23 | 5 31                  |
| 27   | a    | ☿ rise 7.5 ves                          | 14 8    | 27 9     | 1 33   | 6 7                   |
| 28   | b    | ☿ sou. 0.55 ma                          | 15 6    | 10 II 7  | 2 36   | 6 51                  |
| 29   | c    | ♂ rise 11.14 ves                        | 16 5    | 22 44    | 3 31   | 7 44                  |
| 30   | d    | ♀ rise 2.10 ma                          | 17 3    | 5 ☾ 4    | 4 15   | 8 44                  |
| 31   | e    |   | 18 2    | 17 13    | 4 46   | 9 47                  |

| ♂ II M. D.M. |    |    | ♀ V M. D.M. |    |                | ♂ II M. D.M. |    |    |         |    |          |    |
|--------------|----|----|-------------|----|----------------|--------------|----|----|---------|----|----------|----|
| 1            | 21 | 30 | I           | 22 | 3              | 35           | I  | 31 | 22      | 16 | 0        | 0  |
| 6            | 21 | 56 |             | 22 | 3              | 15           |    | 33 | 25      | 30 | S.       | 1  |
| 11           | 22 | 20 |             | 22 | 2              | 50           |    | 34 | 28      | 42 |          | 6  |
| 16           | 22 | 43 |             | 23 | 2              | 25           |    | 35 | I       | 51 |          | 11 |
| 21           | 23 | 2  |             | 23 | I              | 49           |    | 36 | 4       | 59 |          | 16 |
| 26           | 23 | 20 |             | 23 | I              | 14           |    | 37 | 8       | 3  |          | 21 |
| ♀ ♀ M. D.M.  |    |    | ♀ ♀ S. D.M. |    |                | Eq. Day      |    |    | August. |    |          |    |
| 1            | 7  | 45 | I           | 36 | 15             | 36           | I  | 40 | 4       | 42 | Add      |    |
| 2            | 8  | 53 |             | 33 | 17             | 39           |    | 42 | 4       | 32 |          |    |
| 3            | 10 | 1  |             | 29 | 19             | 42           |    | 43 | 4       | 21 |          |    |
| 4            | 11 | 12 |             | 25 | 21             | 44           |    | 44 | 4       | 11 |          |    |
| 5            | 12 | 18 |             | 21 | 23             | 44           |    | 43 | 4       | 00 |          |    |
| 6            | 13 | 26 |             | 18 | 25             | 44           |    | 42 | 3       | 48 |          |    |
| 7            | 14 | 25 |             | 14 | 27             | 43           |    | 41 | 3       | 36 |          |    |
| 8            | 15 | 44 |             | 11 | 29             | 40           |    | 39 | 3       | 23 |          |    |
| 9            | 16 | 53 |             | 7  | I <sup>m</sup> | 36           |    | 36 | 3       | 10 |          |    |
| 10           | 18 | 2  |             | 3  | 3              | 31           |    | 33 | 2       | 56 |          |    |
| 11           | 19 | 11 |             | 0  | 5              | 24           |    | 30 | 2       | 42 |          |    |
| 12           | 20 | 20 | 0           | 54 | 7              | 16           |    | 25 | 2       | 27 |          |    |
| 13           | 21 | 30 |             | 52 | 9              | 7            |    | 21 | 2       | 12 |          |    |
| 14           | 22 | 39 |             | 49 | 10             | 57           |    | 16 | 1       | 56 |          |    |
| 15           | 23 | 49 |             | 45 | 12             | 45           |    | 11 | 1       | 40 |          |    |
| 16           | 24 | 59 |             | 42 | 14             | 32           |    | 6  | 1       | 23 |          |    |
| 17           | 26 | 9  |             | 38 | 16             | 17           | 0  | 1  | 1       | 07 |          |    |
| 18           | 27 | 19 |             | 34 | 18             | 1            | 0  | 54 | 0       | 50 |          |    |
| 19           | 28 | 29 |             | 31 | 19             | 44           |    | 47 | 0       | 33 |          |    |
| 20           | 29 | 39 |             | 27 | 21             | 26           |    | 41 | 0       | 15 |          |    |
| 21           | 0  | 49 | ♂           | 24 | 23             | 6            |    | 34 | 0       | 3  | *        |    |
| 22           | 2  | 00 |             | 20 | 24             | 45           |    | 27 | 0       | 22 | Subtract |    |
| 23           | 3  | 10 |             | 17 | 26             | 23           |    | 20 | 0       | 41 |          |    |
| 24           | 4  | 21 |             | 13 | 28             | 0            |    | 13 | 1       | 00 |          |    |
| 25           | 5  | 32 |             | 10 | 29             | 35           |    | 6  | 1       | 19 |          |    |
| 26           | 6  | 42 |             | 6  | I <sup>m</sup> | 9            | M. | 2  | 1       | 38 |          |    |
| 27           | 7  | 53 |             | 3  | 2              | 43           |    | 9  | 1       | 58 |          |    |
| 28           | 9  | 4  | S.          | 0  | 4              | 15           |    | 17 | 2       | 18 |          |    |
| 29           | 10 | 16 |             | 4  | 5              | 45           |    | 25 | 2       | 39 |          |    |
| 30           | 11 | 27 |             | 7  | 7              | 15           |    | 32 | 2       | 59 |          |    |
|              |    |    |             |    |                |              |    |    |         |    |          |    |



# September hath xxx. days.

New Moon the 6. day, at o. 42. in the morning.  
 First quarter the 13. day, at 6. 51. in the evening.  
 Full Moon the 20. day, at 9. 36. in the morning.  
 Last quarter the 28. day, at 1. 21. afternoon.

| M.D | N.D | Festivals & Plan.<br>Ris. Sou. and Set. | ☉ Place         | ☽ Place          | ☿ Lat. | Full Sea<br>Lond. Br. |
|-----|-----|---|-----------------|------------------|--------|-----------------------|
| 1   | ☿   | 14 past Trin.                           | 19 $\text{M}$ 0 | 29 $\text{S}$ 13 | 5 M 3  | 10 51                 |
| 2   | ☿   | ☿ rise 10.5 ves                         | 19 59           | 11 $\text{S}$ 11 | 5 7    | 11 52                 |
| 3   | ☿   | ☿ rise 6.41 ves                         | 20 57           | 23 6             | 4 58   | 12 49                 |
| 4   | ☿   | ☿ sou. o. 31 ma                         | 21 56           | 4 $\text{M}$ 59  | 4 36   | 1 A 41                |
| 5   | ☿   | ☿ rise 11. 14 ves                       | 22 54           | 16 55            | 4 3    | 2 29                  |
| 6   | ☿   | ☿ rise 2.30 ma                          | 23 53           | 28 56            | 3 18   | 3 13                  |
| 7   | ☿   | ☿ rise 9.57 ves                         | 24 52           | 10 $\text{S}$ 56 | 2 24   | 3 55                  |
| 8   | ☿   | 15 past Trin.                           | 25 51           | 23 11            | 1 23   | 4 30                  |
| 9   | ☿   | & Nat. V. Mar                           | 26 49           | 5 $\text{M}$ 31  | 0 17   | 5 3                   |
| 10  | ☿   | ☿ rise 6.13 ves                         | 27 48           | 18 1             | 0 S 57 | 5 33                  |
| 11  | ☿   | ☿ sou. o. 1 ma                          | 28 47           | 0 7 44           | 2 3    | 6 6                   |
| 12  | ☿   | ☿ rise 11. 9 ves                        | 29 46           | 13 42            | 3 5    | 6 47                  |
| 13  | ☿   | ☿ rise 2. 50 ma                         | 0 $\text{S}$ 45 | 26 58            | 3 57   | 7 35                  |
| 14  | ☿   | Holy Cross                              | 1 44            | 10 $\text{W}$ 36 | 4 38   | 8 34                  |
| 15  | ☿   | 16 past Trin.                           | 2 43            | 24 37            | 5 03   | 9 41                  |
| 16  | ☿   | ☿ rise 9.41 ves                         | 3 42            | 9 $\text{W}$ 2   | 5 12   | 10 55                 |
| 17  | ☿   | ☿ rise 5.46 ves                         | 4 41            | 23 46            | 5 00   | 12 10                 |
| 18  | ☿   | ☿ sou. 11. 33 ves                       | 5 40            | 8 $\text{X}$ 46  | 4 27   | 0 M 10                |
| 19  | ☿   | ☿ rise 11. 5 ves                        | 6 39            | 23 51            | 3 35   | 1 22                  |
| 20  | ☿   | ☿ rise 3. 14 ma                         | 7 38            | 8 $\text{V}$ 52  | 2 26   | 2 29                  |
| 21  | ☿   | St. Matthew                             | 8 37            | 23 40            | 1 13   | 3 29                  |
| 22  | ☿   | 17 past Trin.                           | 9 36            | 8 $\text{S}$ 4   | 0 M 0  | 4 16                  |
| 23  | ☿   | ☿ rise 9.30 ves                         | 10 36           | 22 4             | 1 16   | 4 54                  |
| 24  | ☿   | ☿ rise 5.18 ves                         | 11 35           | 5 $\text{H}$ 36  | 2 26   | 5 27                  |
| 25  | ☿   | ☿ sou. 11. 4 ves                        | 12 34           | 18 41            | 3 25   | 6 2                   |
| 26  | ☿   | ☿ rise 11. 1 ves                        | 13 33           | 1 $\text{S}$ 23  | 4 13   | 6 41                  |
| 27  | ☿   | ☿ rise 3. 38 ma                         | 14 33           | 13 45            | 4 47   | 7 26                  |
| 28  | ☿   |   | 15 32           | 25 53            | 5 9    | 8 17                  |
| 29  | ☿   | St. Michael                             | 16 32           | 7 $\text{S}$ 53  | 5 16   | 9 11                  |
| 30  | ☿   |   | 17 31           | 19 46            | 5 8    | 10 10                 |

|    | h  | II | M. | D.M. | z  | v  | M. | D.M. | g  | S. | D.M. |
|----|----|----|----|------|----|----|----|------|----|----|------|
| 1  | 23 | 37 | 1  | 24   | 0  | 30 | 1  | 38   | 11 | 40 | 0 27 |
| 6  | 23 | 49 |    | 24   | 29 | 51 |    | 38   | 14 | 37 | 32   |
| 11 | 23 | 59 |    | 25   | 29 | 11 |    | 38   | 17 | 32 | 38   |
| 16 | 24 | 6  |    | 25   | 28 | 31 |    | 37   | 20 | 22 | 44   |
| 21 | 24 | 10 |    | 25   | 27 | 51 |    | 37   | 23 | 9  | 50   |
| 26 | 24 | 12 |    | 26   | 27 | 14 |    | 37   | 25 | 51 | 56   |

|   | q  | Ω  | S.   | D.M. | q  | Ω  | M. | D.M. | Eq. | Day | September. |
|---|----|----|------|------|----|----|----|------|-----|-----|------------|
| 1 | 13 | 50 | 0    | 13   | 10 | 11 | 0  | 48   | 3   | 40  | Subtract   |
| 2 | 15 | 1  |      | 17   | 11 | 37 |    | 56   | 4   | 00  |            |
| 9 | 16 | 13 |      | 20   | 13 | 2  | 1  | 3    | 4   | 21  |            |
| 1 | 17 | 25 |      | 23   | 14 | 26 |    | 11   | 4   | 42  |            |
| 9 | 18 | 27 |      | 26   | 15 | 48 |    | 19   | 5   | 3   |            |
| 3 | 19 | 48 |      | 29   | 17 | 10 |    | 27   | 5   | 24  |            |
| 5 | 21 | 00 |      | 32   | 18 | 30 |    | 34   | 5   | 45  |            |
| 0 | 22 | 13 |      | 35   | 19 | 48 |    | 42   | 6   | 6   |            |
| 3 | 23 | 25 |      | 37   | 21 | 5  |    | 49   | 6   | 26  |            |
| 3 | 24 | 37 |      | 40   | 22 | 21 |    | 57   | 6   | 47  |            |
| 6 | 25 | 49 |      | 43   | 23 | 35 | 2  | 4    | 7   | 8   |            |
| 7 | 27 | 2  |      | 46   | 24 | 47 |    | 11   | 7   | 28  |            |
| 5 | 28 | 14 |      | 48   | 25 | 58 |    | 18   | 7   | 49  |            |
| 4 | 29 | 27 |      | 51   | 27 | 7  |    | 25   | 8   | 9   |            |
| 1 | 0  | 39 |      | 53   | 28 | 14 |    | 31   | 8   | 29  |            |
| 5 | 1  | 52 |      | 56   | 29 | 19 |    | 38   | 8   | 49  |            |
| 0 | 3  | 5  |      | 58   | 0  | 22 |    | 44   | 9   | 9   |            |
| 0 | 4  | 18 | 1--- | 0    | 1  | 23 |    | 49   | 9   | 29  |            |
| 2 | 5  | 31 |      | 3    | 2  | 20 |    | 55   | 9   | 49  |            |
| 9 | 6  | 44 |      | 5    | 3  | 15 | 3  | 0    | 10  | 8   |            |
| 9 | 7  | 57 |      | 7    | 4  | 7  |    | 5    | 10  | 26  |            |
| 6 | 9  | 10 |      | 9    | 4  | 56 |    | 9    | 10  | 44  |            |
| 4 | 10 | 23 |      | 11   | 5  | 41 |    | 12   | 11  | 2   |            |
| 7 | 11 | 37 |      | 13   | 6  | 22 |    | 16   | 11  | 20  |            |
| 2 | 12 | 50 |      | 15   | 6  | 59 |    | 18   | 3   | 37  |            |
| 1 | 14 | 3  |      | 16   | 7  | 31 |    | 20   | 11  | 54  |            |
| 6 | 15 | 17 |      | 18   | 7  | 57 |    | 21   | 12  | 11  |            |
| 7 | 16 | 30 |      | 20   | 8  | 19 |    | 21   | 12  | 28  |            |
| 1 | 17 | 44 |      | 21   | 8  | 34 |    | 20   | 12  | 44  |            |
| 0 | 18 | 58 |      | 23   | 8  | 42 |    | 18   | 13  | 00  |            |

# October hath xxxi. days.

New Moon the 5. day, at 5. 7. in the evening.

First quarter the 13. day, at 3. 21. in the morning.

Full Moon the 19. day, at 8. 7. at night.

Last quarter the 27. day, at 8. 15. in the morning.

| M.D. | M.D. | Festivals & Plan.<br>Ris. Sou. and Set. | ☉ Place | ☽ Place | ☽ Lat. | Full Sea<br>Lond. Br. |
|------|------|---|---------|---------|--------|-----------------------|
| 1    | a    | h rise 8. 21 ves                        | 18 31   | 1 m 38  | 4 M 49 | 11 10                 |
| 2    | b    | h sou. 4. 25 ma                         | 19 30   | 13 33   | 4 17   | 12 9                  |
| 3    | c    | ☿ sets 4. 19 ma                         | 20 30   | 25 30   | 3 34   | 1 A 3                 |
| 4    | d    | ☿ sou. 10. 24 ves                       | 21 29   | 7 37    | 2 41   | 1 58                  |
| 5    | e    | ♂ rise 10. 52 ves                       | 22 29   | 19 55   | 1 39   | 2 45                  |
| 6    | f    | 19 past Trin.                           | 23 29   | 2 m 16  | 0 S 32 | 3 31                  |
| 7    | g    | ♂ sou. 6. 45 ma                         | 24 29   | 14 54   | 0 44   | 4 12                  |
| 8    | a    | ♀ rise 4. 12 ma                         | 25 28   | 27 41   | 1 53   | 4 47                  |
| 9    | b    | h rise 7. 49 ves                        | 26 28   | 10 43   | 2 57   | 5 19                  |
| 10   | c    | h sou. 3. 50 ma                         | 27 28   | 23 56   | 3 52   | 5 52                  |
| 11   | d    | ☿ sou. 9. 53 ves                        | 28 28   | 7 20    | 4 36   | 6 29                  |
| 12   | e    | ☿ sets 3. 41 ma                         | 29 28   | 21 4    | 5 5    | 7 7                   |
| 13   | f    | 20 past Trin.                           | 0 m 27  | 4 59    | 5 17   | 8 16                  |
| 14   | g    | ♂ rise 10. 41 ves                       | 1 27    | 19 9    | 5 11   | 9 25                  |
| 15   | a    | ♂ sou. 6. 28 ma                         | 2 27    | 3 33    | 4 45   | 10 39                 |
| 16   | b    | ♀ rise 4. 39 ma                         | 3 27    | 18 5    | 4 1    | 11 53                 |
| 17   | c    |   | 4 27    | 2 44    | 3 0    | 0 M 6                 |
| 18   | d    | St. Luke Evan.                          | 5 27    | 17 19   | 1 47   | 1 6                   |
| 19   | e    |   | 6 27    | 1 49    | 0 M 29 | 2 10                  |
| 20   | f    | 21 past Trin.                           | 7 28    | 16 8    | 0 44   | 3 7                   |
| 21   | g    | Mercurius latet                         | 8 28    | 0 11    | 1 59   | 3 55                  |
| 22   | a    | sub Sole.                               | 9 28    | 13 34   | 3 4    | 4 34                  |
| 23   | b    | Term begins                             | 10 28   | 26 44   | 3 59   | 5 7                   |
| 24   | c    | h rise 6. 53 ves                        | 11 28   | 9 29    | 4 40   | 5 40                  |
| 25   | d    | h sou. 2. 52 ma                         | 12 29   | 21 57   | 5 6    | 6 15                  |
| 26   | e    | ☿ sou. 8. 57 ves                        | 13 29   | 4 6     | 5 17   | 6 56                  |
| 27   | f    | ☿ sets 2. 38 ma                         | 14 29   | 16 5    | 5 14   | 7 43                  |
| 28   | g    | St. Simon & Ju.                         | 15 30   | 27 57   | 4 58   | 8 35                  |
| 29   | a    | ♂ rise 10. 17 ves                       | 16 30   | 9 49    | 4 30   | 9 32                  |
| 30   | b    | ♂ sou. 5. 59 ma                         | 17 31   | 21 42   | 3 50   | 10 29                 |
| 31   | c    | ♀ rise 5. 27 ma                         | 18 31   | 2 45    | 3 50   | 11 26                 |



|    | h  | II | M. | D.M. | ꝥ  | Υ  | M.    | D.M. | ♂   | ♂   | S.       | D.M.                                      |    |
|----|----|----|----|------|----|----|-------|------|-----|-----|----------|---|----|
| I  | 24 | R. | 9  | I    | 26 | 26 | 37    | I    | 36  | 28  | 29       | I   | 3  |
| 6  | 24 |    | 5  |      | 26 | 26 | 4     |      | 36  | I   | Ω        | 01  | 10 |
| 11 | 23 |    | 58 |      | 27 | 25 | 35    |      | 35  | 3   | 29       |   | 16 |
| 16 | 23 |    | 48 |      | 27 | 25 | 9     |      | 34  | 5   | 50       |   | 24 |
| 21 | 23 |    | 36 |      | 27 | 24 | 49    |      | 33  | 8   | 5        |   | 32 |
| 26 | 23 |    | 22 |      | 27 | 24 | 32    |      | 32  | 10  | 13       |   | 40 |
|    | ♀  | η  | M. | D.M. | ♀  | m  | M.    | D.M. | Eq. | Day | October. |   |    |
| I  | 20 |    | 11 | I    | 24 | 8  | 43    | 3    | 15  | 13  | 15       | Subtrah                                   |    |
| 2  | 21 |    | 25 |      | 25 | 8  | R. 38 |      | 11  | 13  | 28       |   |    |
| 3  | 22 |    | 39 |      | 27 | 8  | 22    |      | 5   | 13  | 42       |   |    |
| 4  | 23 |    | 53 |      | 28 | 7  | 59    | 2    | 58  | 13  | 55       |   |    |
| 5  | 25 |    | 7  |      | 29 | 7  | 28    |      | 49  | 14  | 8        |   |    |
| 6  | 26 |    | 21 |      | 30 | 6  | 47    |      | 38  | 14  | 20       |   |    |
| 7  | 27 |    | 35 |      | 31 | 5  | 58    |      | 25  | 14  | 32       |   |    |
| 8  | 28 |    | 49 |      | 32 | 5  | 2     |      | 11  | 14  | 43       |   |    |
| 9  | 0  | II | 3  |      | 32 | 3  | 57    | I    | 55  | 14  | 53       |   |    |
| 10 | 1  |    | 18 |      | 33 | 2  | 47    |      | 38  | 15  | 3        |   |    |
| 11 | 2  |    | 32 |      | 34 | I  | 33    |      | 19  | 15  | 12       |   |    |
| 12 | 3  |    | 46 |      | 34 | 0  | II 16 | 0    | 59  | 15  | 21       |   |    |
| 13 | 5  |    | 00 |      | 35 | 19 | 0     |      | 39  | 15  | 29       |   |    |
| 14 | 6  |    | 16 |      | 35 | 27 | 45    |      | 18  | 15  | 36       |   |    |
| 15 | 7  |    | 29 |      | 36 | 26 | 35    | S.   | 2   | 15  | 42       |   |    |
| 16 | 8  |    | 44 |      | 36 | 25 | 32    |      | 22  | 15  | 48       |   |    |
| 17 | 9  |    | 58 |      | 36 | 24 | 38    |      | 41  | 15  | 53       |   |    |
| 18 | 11 |    | 13 |      | 36 | 23 | 54    |      | 58  | 15  | 57       |   |    |
| 19 | 12 |    | 28 |      | 36 | 23 | 21    | I    | 13  | 16  | 00       | ) Eclipsed,<br>19. day, 6 h<br>37'. p. m. |    |
| 20 | 13 |    | 42 |      | 36 | 22 | 59    |      | 27  | 16  | 2        |   |    |
| 21 | 14 |    | 57 |      | 36 | 22 | 50    |      | 39  | 16  | 4        |   |    |
| 22 | 16 |    | 12 |      | 36 | 22 | D. 52 |      | 49  | 16  | 5        |   |    |
| 23 | 17 |    | 26 |      | 36 | 23 | 4     |      | 57  | 16  | 5        |   |    |
| 24 | 18 |    | 41 |      | 35 | 23 | 28    | 2    | 4   | 16  | 5        |   |    |
| 25 | 19 |    | 56 |      | 35 | 24 | 1     |      | 9   | 16  | 4        |   |    |
| 26 | 21 |    | 11 |      | 34 | 24 | 42    |      | 12  | 16  | 1        |   |    |
| 27 | 22 |    | 26 |      | 34 | 25 | 32    |      | 15  | 15  | 58       |   |    |
| 28 | 23 |    | 41 |      | 33 | 26 | 28    |      | 15  | 15  | 54       |   |    |
| 29 | 24 |    | 56 |      | 33 | 27 | 40    |      | 14  | 15  | 49       |   |    |
| 30 | 26 |    | 10 |      | 32 | 28 | 37    |      | 14  | 15  | 43       |   |    |
| 31 | 27 |    | 25 |      | 31 | 29 | 49    |      | 12  | 15  | 36       |   |    |

# November hath xxx. days.

New Moon the 4. day, at 9. 17. in the morning,  
 First quarter the 11. day, at 11. 10. before noon.  
 Full Moon the 18. day, at 9. 8. the morning.  
 Last quarter the 26. day, at 5. 33. in the morning.

| M.D. | W.D. | Festivals & Plan.<br>Ris. Sou. and Set. | ☉ Place | ☽ Place  | ☽ Lat. | Full Sea<br>Lond. Br. |
|------|------|---|---------|----------|--------|-----------------------|
| 1    | d    | All Saints                              | 19m 31  | 15 50    | 2 M 01 | 12 20                 |
| 2    | e    | All Souls                               | 20 32   | 28 12 0  | 55 1 A | 18 3                  |
| 3    | f    | 23 past Trin.                           | 21 32   | 10m 53 0 | S 21 2 | 14 4                  |
| 4    | g    | h rise 6. 8 ves                         | 22 33   | 23 48 1  | 32 3   | 7 5                   |
| 5    | a    | Powder Treas.                           | 23 34   | 7 7 0 2  | 39 3   | 53 6                  |
| 6    | b    | h sou. 2. 5 ma                          | 24 34   | 20 26 3  | 36 4   | 31 7                  |
| 7    | c    | ☿ sou. 8. 7 ves                         | 25 35   | 4 7 6 4  | 25 5   | 9 8                   |
| 8    | d    | ☿ sets 1. 48 ma                         | 26 35   | 17 54 4  | 57 5   | 46 9                  |
| 9    | e    | ♂ rise 9. 45 ma                         | 27 36   | 1 54 5   | 14 6   | 25 10                 |
| 10   | f    | 24 past Trin.                           | 28 37   | 15 54 5  | 12 7   | 11 11                 |
| 11   | g    | ♂ sou. 5. 27 ma                         | 29 38   | 0 7 0 4  | 51 8   | 4 12                  |
| 12   | a    | ♀ rise 6. 3 ma                          | 0 38    | 14 10 4  | 12 8   | 57 13                 |
| 13   | b    | h rise 5. 29 ves                        | 1 39    | 28 19 3  | 17 9   | 51 14                 |
| 14   | c    | h sou. 1. 28 ma                         | 2 40    | 12 31 2  | 10 10  | 51 15                 |
| 15   | d    | ☿ sou. 7. 36 ves                        | 3 41    | 26 38 0  | 57 11  | 59 16                 |
| 16   | e    | ☿ sets 1. 16 ma                         | 4 41    | 10 39 0  | M 14 1 | M 9 17                |
| 17   | f    | 25 past Trin.                           | 5 42    | 24 31 1  | 29 0   | M 9 18                |
| 18   | g    | ♂ rise 9. 26 ves                        | 6 43    | 8 9 2    | 37 2   | 18 19                 |
| 19   | a    | ♂ sou. 5. 2 ma                          | 7 44    | 21 31 3  | 36 3   | 24 20                 |
| 20   | b    | ♀ rise 6. 27 ma                         | 8 45    | 4 35 4   | 21 4   | 14 21                 |
| 21   | c    | h rise 4. 52 ves                        | 9 46    | 17 21 4  | 51 4   | 51 22                 |
| 22   | d    | h sou. 0. 53 ma                         | 10 47   | 29 48 5  | 9 5    | 23 23                 |
| 23   | e    | ☿ sou. 7. 1 ves                         | 11 48   | 12 5 5   | 11 5   | 53 24                 |
| 24   | f    | 26 past Trin.                           | 12 48   | 24 1 4   | 58 6   | 25 25                 |
| 25   | g    | ☿ sets 0. 40 ma                         | 13 49   | 5 53 4   | 34 7   | 1 26                  |
| 26   | a    | ♂ rise 9. 4 ves                         | 14 50   | 17 44 3  | 58 7   | 39 27                 |
| 27   | b    | ♂ sou. 4. 34 ma                         | 15 51   | 29 34 3  | 11 8   | 19 28                 |
| 28   | c    | Term Ends                               | 16 52   | 11 32 2  | 17 9   | 6 29                  |
| 29   | d    | ♀ rise 6. 49 ma                         | 17 53   | 23 42 1  | 15 10  | 5 30                  |
| 30   | e    | St. Andrew                              | 18 54   | 6 m 8 0  | 8 11   | 8 31                  |

|    | h  | II | M. | D.M. | z  | x    | M. | D.M. | δ  | Ω  | S. | D.M. |
|----|----|----|----|------|----|------|----|------|----|----|----|------|
| 1  | 23 | 51 | 1  | 28   | 24 | 19   | 1  | 30   | 12 | 35 | 1  | 50   |
| 6  | 23 | 32 |    | 28   | 24 | 13   |    | 28   | 14 | 24 |    | 59   |
| 11 | 23 | 11 |    | 27   | 24 | D.13 |    | 27   | 16 | 3  | 2  | 9    |
| 16 | 22 | 48 |    | 27   | 24 | 19   |    | 26   | 17 | 30 |    | 19   |
| 21 | 22 | 25 |    | 27   | 24 | 30   |    | 24   | 18 | 45 |    | 29   |
| 26 | 22 | 00 |    | 27   | 24 | 45   |    | 23   | 19 | 46 |    | 41   |

|    | ⊙ Rise |    | D Sou |    | ♀ m S. |    | D.M. | Eq. Day |    | November. |    |
|----|--------|----|-------|----|--------|----|------|---------|----|-----------|----|
| 1  | 28     | 41 | 30    | 1  | 5      | 2  | 9    | 15      | 29 | Subtract  |    |
| 2  | 29     | 56 | 29    | 2  | 23     |    | 5    | 15      | 21 |           |    |
| 3  | 1 m    | 11 | 28    | 3  | 45     |    | 1    | 15      | 12 |           |    |
| 4  | 2      | 26 | 27    | 5  | 9      | 1  | 57   | 15      | 2  |           |    |
| 5  | 3      | 41 | 26    | 6  | 35     |    | 52   | 14      | 51 |           |    |
| 6  | 4      | 56 | 25    | 8  | 2      |    | 46   | 14      | 40 |           |    |
| 7  | 6      | 11 | 24    | 9  | 31     |    | 40   | 14      | 27 |           |    |
| 8  | 7      | 26 | 22    | 11 | 1      |    | 34   | 14      | 14 |           |    |
| 9  | 8      | 42 | 21    | 12 | 32     |    | 28   | 14      | 00 |           |    |
| 10 | 9      | 57 | 20    | 14 | 3      |    | 22   | 13      | 46 |           |    |
| 11 | 11     | 12 | 18    | 15 | 36     |    | 15   | 13      | 30 |           |    |
| 12 | 12     | 27 | 17    | 17 | 8      |    | 8    | 13      | 13 |           |    |
| 13 | 13     | 43 | 15    | 18 | 41     |    | 1    | 12      | 56 |           |    |
| 14 | 14     | 58 | 13    | 20 | 14     | 0  | 54   | 12      | 38 |           |    |
| 15 | 16     | 13 | 12    | 21 | 47     |    | 47   | 12      | 18 |           |    |
| 16 | 17     | 29 | 10    | 23 | 20     |    | 40   | 11      | 59 |           |    |
| 17 | 18     | 44 | 8     | 24 | 54     |    | 33   | 11      | 39 |           |    |
| 18 | 19     | 59 | 6     | 26 | 27     |    | 26   | 11      | 18 |           |    |
| 19 | 21     | 15 | 5     | 28 | 1      |    | 19   | 10      | 56 |           |    |
| 20 | 22     | 30 | 3     | 29 | 35     |    | 12   | 10      | 34 |           |    |
| 21 | 23     | 46 | 1     | 1  | 7      | 8  | 5    | 10      | 11 |           |    |
| 22 | 25     | 1  | 0     | 59 | 2      | 42 | M.   | 2       | 9  |           | 48 |
| 23 | 26     | 16 |       | 57 | 4      | 16 |      | 8       | 9  |           | 24 |
| 24 | 27     | 32 |       | 55 | 5      | 50 |      | 15      | 8  |           | 59 |
| 25 | 28     | 47 |       | 53 | 7      | 23 |      | 22      | 8  |           | 34 |
| 26 | 0      | 7  | 3     | 50 | 8      | 57 |      | 28      | 8  |           | 8  |
| 27 | 1      | 18 |       | 48 | 10     | 31 |      | 34      | 7  |           | 42 |
| 28 | 2      | 34 |       | 46 | 12     | 5  |      | 41      | 7  |           | 14 |
| 29 | 3      | 49 |       | 44 | 13     | 39 |      | 47      | 6  |           | 47 |
| 30 | 5      | 5  |       | 42 | 15     | 12 |      | 53      | 6  |           | 20 |



# December hath xxxi. days.

New Moon the 3. day, at 11. 50. at night.  
 First quarter the 10. day, at 7. 12. at night.  
 Full Moon the 18. day, at 0. 40. in the morning.  
 Last quarter the 26. day, at 3. 10. in the morning.

| M.D. | M.D.     | Festivals & Plan.<br>Ris. Sou. and Ser. | ☉ Place | ☽ Place | ☽ Lat. | Full Sea<br>Lond. Br. |
|------|----------|---|---------|---------|--------|-----------------------|
| 1    | <b>f</b> | Sund. Adv.                              | 19 4 56 | 18 m 55 | 1 S 7  | 12 16                 |
| 2    | <b>g</b> | ☿ rise 4. 2 ves                         | 20 57   | 2 4 5   | 2 15   | 1 A 22                |
| 3    | <b>a</b> | ☿ sou. 11. 56 ves                       | 21 58   | 15 35   | 3 16   | 2 31                  |
| 4    | <b>b</b> | ☿ sets 6. 12 ves                        | 22 59   | 29 27   | 4 6    | 3 28                  |
| 5    | <b>c</b> | ☿ sets 11. 59 ves                       | 24 00   | 13 36   | 4 44   | 4 16                  |
| 6    | <b>d</b> | ♂ rise 6. 27 ves                        | 25 01   | 27 55   | 5 44   | 5 53                  |
| 7    | <b>e</b> | ♂ sou. 3. 47 ma                         | 26 2    | 12 21   | 5 55   | 27                    |
| 8    | <b>f</b> | 2 Sund. Adv.                            | 27 3    | 26 44   | 4 48   | 6 1                   |
| 9    | <b>g</b> | Venus & ♀ ius                           | 28 4    | 11 1    | 4 12   | 6 40                  |
| 10   | <b>a</b> | latent sub ☉.                           | 29 5    | 25 11   | 3 20   | 7 27                  |
| 11   | <b>b</b> | ☿ sou. 11. 19 ves                       | 0 6     | 9 11    | 2 17   | 8 24                  |
| 12   | <b>c</b> | ☿ sets 7. 14 ma                         | 1 8     | 23 2    | 1 7    | 9 27                  |
| 13   | <b>d</b> | ☿ sou. 5. 42 ma                         | 2 9     | 6 45    | 0 M 0  | 10 35                 |
| 14   | <b>e</b> | ☿ sets 11. 34 ves                       | 3 10    | 20 17   | 1 12   | 11 47                 |
| 15   | <b>f</b> | 3 Sund. Adv.                            | 4 11    | 3 42    | 2 20   | 12 55                 |
| 16   | <b>g</b> | ♂ rise 5. 34 ves                        | 5 12    | 16 57   | 3 18   | 0 M 55                |
| 17   | <b>a</b> | ♂ sou. 2. 59 ma                         | 6 13    | 0 1     | 4 7    | 1 59                  |
| 18   | <b>b</b> |   | 7 14    | 12 50   | 4 40   | 2 53                  |
| 19   | <b>c</b> | ☿ sou. 10. 42 ves                       | 8 16    | 25 27   | 4 59   | 3 41                  |
| 20   | <b>d</b> | ☿ sets 6. 39 ma                         | 9 17    | 7 49    | 5 3    | 4 19                  |
| 21   | <b>e</b> | St. Thomas                              | 10 18   | 19 59   | 4 53   | 4 51                  |
| 22   | <b>f</b> | 4 Sund. Adv.                            | 11 19   | 2 1     | 4 32   | 5 19                  |
| 23   | <b>g</b> | ☿ sou. 4. 56 ves                        | 12 20   | 13 52   | 3 57   | 5 46                  |
| 24   | <b>a</b> | ☿ sets 10. 52 ves                       | 13 21   | 25 42   | 3 14   | 6 13                  |
| 25   | <b>b</b> | Nativ. Christ.                          | 14 22   | 7 32    | 2 22   | 6 44                  |
| 26   | <b>c</b> | St. Stephen                             | 15 24   | 19 27   | 1 24   | 7 22                  |
| 27   | <b>d</b> | St. John                                | 16 25   | 1 m 15  | 0 20   | 8 11                  |
| 28   | <b>e</b> | Innocents                               | 17 26   | 13 59   | 0 53   | 9 6                   |
| 29   | <b>f</b> |   | 18 27   | 26 45   | 1 57   | 10 10                 |
| 30   | <b>g</b> | ♂ rise 4. 23 ves                        | 19 28   | 9 58    | 2 58   | 11 22                 |
| 31   | <b>a</b> | ♂ sou. 1. 51 ma                         | 20 29   | 23 38   | 3 50   | 12 26                 |

| ♄ II M. D.M. |    |    | ♄ ✕ M. D.M. |    |    | ♄ Ω S. D.M. |   |    |           |    |          |    |
|--------------|----|----|-------------|----|----|-------------|---|----|-----------|----|----------|----|
| 1            | 21 | 36 | 1           | 26 | 25 | 5           | 1 | 21 | 20        | 32 | 2        | 52 |
| 6            | 21 | 11 |             | 26 | 25 | 29          |   | 20 | 21        | 01 | 3        | 4  |
| 11           | 20 | 47 |             | 25 | 25 | 59          |   | 18 | 21        | 12 |          | 16 |
| 16           | 20 | 23 |             | 25 | 26 | 33          |   | 17 | 21R       | 4  |          | 28 |
| 21           | 20 | 00 |             | 24 | 27 | 11          |   | 16 | 20        | 35 |          | 41 |
| 26           | 19 | 38 |             | 23 | 27 | 52          |   | 15 | 10        | 46 |          | 52 |
| ♀ ♀ S. D.M.  |    |    | ♀ ♀ M D.M.  |    |    | Eq. Day     |   |    | December. |    |          |    |
| 1            | 6  | 20 | 0           | 39 | 16 | 46          | 0 | 59 | 5         | 53 | Subtract |    |
| 2            | 7  | 36 |             | 37 | 18 | 20          | 1 | 4  | 5         | 25 |          |    |
| 3            | 8  | 51 |             | 35 | 19 | 55          |   | 10 | 4         | 57 |          |    |
| 4            | 10 | 7  |             | 32 | 21 | 29          |   | 15 | 4         | 27 |          |    |
| 5            | 11 | 22 |             | 30 | 23 | 3           |   | 20 | 3         | 57 |          |    |
| 6            | 12 | 38 |             | 28 | 24 | 38          |   | 25 | 3         | 28 |          |    |
| 7            | 13 | 53 |             | 25 | 26 | 13          |   | 30 | 2         | 59 |          |    |
| 8            | 15 | 9  |             | 23 | 27 | 47          |   | 34 | 2         | 30 |          |    |
| 9            | 16 | 24 |             | 21 | 29 | 23          |   | 38 | 2         | 00 |          |    |
| 10           | 17 | 40 |             | 18 | 0  | 58          |   | 43 | 1         | 29 |          |    |
| 11           | 18 | 55 |             | 16 | 2  | 34          |   | 47 | 0         | 59 | Add      | *  |
| 12           | 20 | 11 |             | 13 | 4  | 9           |   | 50 | 0         | 28 |          |    |
| 13           | 21 | 26 |             | 11 | 5  | 46          |   | 53 | 0         | 2  |          |    |
| 14           | 22 | 42 |             | 8  | 7  | 22          |   | 56 | 0         | 32 |          |    |
| 15           | 23 | 57 |             | 6  | 8  | 58          |   | 59 | 1         | 2  |          |    |
| 16           | 25 | 13 |             | 4  | 10 | 35          | 2 | 1  | 1         | 32 |          |    |
| 17           | 26 | 29 |             | 1  | 12 | 12          |   | 3  | 2         | 1  |          |    |
| 18           | 27 | 44 | M.          | 1  | 13 | 49          |   | 5  | 2         | 31 |          |    |
| 19           | 29 | 00 |             | 4  | 15 | 27          |   | 6  | 3         | 00 |          |    |
| 20           | 0  | 15 | W           | 6  | 17 | 5           |   | 7  | 3         | 29 |          |    |
| 21           | 1  | 31 |             | 9  | 18 | 43          |   | 7  | 3         | 57 |          |    |
| 22           | 2  | 46 |             | 11 | 20 | 21          |   | 7  | 4         | 25 |          |    |
| 23           | 4  | 2  |             | 13 | 21 | 59          |   | 7  | 4         | 53 |          |    |
| 24           | 5  | 17 |             | 16 | 23 | 38          |   | 6  | 5         | 20 |          |    |
| 25           | 6  | 33 |             | 18 | 25 | 16          |   | 5  | 5         | 48 |          |    |
| 26           | 7  | 48 |             | 20 | 26 | 55          |   | 3  | 6         | 15 |          |    |
| 27           | 9  | 4  |             | 23 | 28 | 33          |   | 1  | 6         | 41 |          |    |
| 28           | 10 | 19 |             | 25 | 0  | 11          | I | 57 | 7         | 7  |          |    |
| 29           | 11 | 35 |             | 27 | 1  | 49          |   | 54 | 7         | 33 |          |    |
| 30           | 12 | 50 |             | 29 | 3  | 26          |   | 50 | 7         | 58 |          |    |
| 31           | 14 | 6  |             | 32 | 5  | 3           |   | 45 | 8         | 22 |          |    |

# An Explication of the Pages of the A L M A N A C K.

**E** Very month has two, the right and the left hand Pages. The left hand Page contains 7 Columns. 1. The days of the Month. 2. The Dominical Letter, and other letters for the Week-days. 3. The Festival notable days; the time of the Rising, Southing, and Setting of the Planets, where  $\text{♄}$  stands for *Saturn*,  $\text{♃}$  for *Jupiter*, and  $\text{♂}$  for *Mars*,  $\text{♀}$  for *Venus*, and  $\text{☿}$  for *Mercury*. 4. The  $\odot$  place. 5. The  $\text{♊}$  place. 6. The  $\text{♊}$  latitude, Septentrional or Meridional. The 7th. is the time of High-water at *London-bridge*, and at *Tinmouth* (much differing from the ordinary Accompt) and observing to add or subtract the time set to the places following, to or for the time in this Column serves at those places, *Barwick*, *Flushing*, and *Hamborough*, add 45'. *Cork*, *Severn*, and *Calice*, add 1 h. 30'. *Falmouth* and *Humber*, add 2 h. 15'. *Plimouth*, *Hull*, *Lyn*, add 3 h. *Bristol*, add 3 h. 45'. *Milford* and *Landsend*, add 4 h. 30'. *Portland* and *Dublin*, add 5 h. 15'. *Pool*, *Dunbar*, and *Diep*, add 6 h.

But for *Gravesend*, *Downs*, and *Scilly*, subtract 1 h. 30'. *Rocheſter* and *Black-Tail* subtract 2 h. 15'. *Sheerness*, *Southampton*, and *Portsmouth*, subtract 3 h. *Rye*, subtract 3 h. 45'. *Yarmouth* and *Dover*, subtract 4 h. 30'. *Needles*, *Orford*, *North* and *South Forelands*, subtract 5 h. 15'. Note M stands for Morning, A Afternoon.

The right hand Page has 7 Columns at the top; the first Column has the first day of each Month, and every fifth day more. 2. has  $\text{♄}$  place: 3. his latitude: 4.  $\text{♃}$  place: 5. his latitude: 6.  $\text{♂}$  his place, and 7. his latitude. Below 6 Columns; the first contains the days of the Month: the 2.  $\text{♀}$  place: 3. her latitude: 4.  $\text{☿}$  place: 5. his latitude: 6. The Table of Equations.

Note that *France*, *Italy*, and many other places beyond the Seas that follow the New or Gregorian Accompt, precedes ours by ten days; so that adding ten to ours, you have the Foreign Accompt.



## The Kings Offering-Days.

**H**ouſhold-days when the Beſant is to be given to the Lord Steward, or other Whiteſtaff Officer,

Viz. { Christmas-day.  
Eaſter-day.  
Whitſunday.  
All-Saints.

Gold, Myrrh, and Frankincenſe to be offered.

On { New years-day.  
Twelfth-day.

Other Offering-Days.

Viz. { Candlemas-day.  
Lady-day.  
Aſcenſion.  
Trinity-Sunday.  
St. John Baptiſt.  
St. Michael the Archangel.

*The Kings Collar-days without Offering.*

**T**HE Holy-days and Sundays in the Twelve days, St. Matthias, Coronation-day, Holy-days in Eaſter and Whitſun-weeks, St. George, St. Mark, St. Philip and Jacob, Kings birth-day, St. Peter, St. James, St. Bartholomew, St. Matthew, St. Luke, St. Simon and Jude, Gunpowder-Treaſon, St. Andrew, and St. Thomas.

*An Explication of the following Tables,  
besides the Top-space for break of Day,  
for every fifth day.*

**T**O every Month belongs four Columns.  
The first is common to the other three,  
being the days of the Month.

The Second is the Suns Rising for each day,  
and taking that from 12 hours it gives the Set-  
ting; for the Sun will rise so much before or  
after six as he shall set after or before six.

The Third Column gives the time when the  
Moon comes truly South in the Meridian of  
*London*, having respect to her Latitude: M<sup>signifies</sup> Morning, A Afternoon.

The Fourth gives the Moons Rising and  
Setting.

After these follow the Tables of the  
Suns Right Ascension in time for every day  
at Noon.

And a Table of 30 of the most notable fixed  
Stars, whose Uses follow them.

**January.**

# January.

## Day-Break.

1. day 5 h. 52'. 6. day 5 h. 48'. 11. day 5 h. 43'. 16. day 5 h. 37'. 21. day 5 h. 30'. 26. day 5 h. 22'.

|    | ☉     | ☽       | ☿       |
|----|-------|---------|---------|
|    | Rise. | South.  | Ri.&Set |
| 1  | 8 00  | 2 13    | 8 16    |
| 2  | 7 59  | 2 55    | 9 22    |
| 3  | 7 58  | 3 37    | 10 28   |
| 4  | 7 57  | 4 21    | 11 33   |
| 5  | 7 56  | 5 06    | 12 38   |
| 6  | 7 55  | 5 54    | 0 M. 38 |
| 7  | 7 53  | 6 44    | 1 45    |
| 8  | 7 52  | 7 37    | 3 4     |
| 9  | 7 51  | 8 32    | 4 12    |
| 10 | 7 50  | 9 30    | 5 14    |
| 11 | 7 48  | 10 34   | 6 6     |
| 12 | 7 47  | 11 34   | 6 57    |
| 13 | 7 45  | 12 32   | D Sets  |
| 14 | 7 43  | 1 A. 28 | 7 7     |
| 15 | 7 41  | 2 23    | 8 29    |
| 16 | 7 40  | 3 15    | 9 55    |
| 17 | 7 38  | 4 6     | 11 15   |
| 18 | 7 37  | 4 55    | 12 20   |
| 19 | 7 35  | 5 43    | 0 M. 20 |
| 20 | 7 34  | 6 32    | 1 28    |
| 21 | 7 32  | 7 22    | 2 36    |
| 22 | 7 30  | 8 12    | 3 40    |
| 23 | 7 28  | 9 2     | 4 23    |
| 24 | 7 27  | 9 51    | 5 10    |
| 25 | 7 25  | 10 38   | 5 48    |
| 26 | 7 23  | 11 23   | 6 7     |
| 27 | 7 22  | 12 7    | D Rise  |
| 28 | 7 20  | 0 M. 7  | 6 1     |
| 29 | 7 18  | 0 49    | 7 8     |
| 30 | 7 16  | 1 31    | 8 12    |
| 31 | 7 14  | 2 13    | 9 20    |

# February.

## Day-Break.

1. day 5 h. 13'. 6. day 5 h. 5'. 11. day 4 h. 57'. 16. day 4 h. 47'. 21. day 4 h. 37'. 26. day 4 h. 27'.

|    | ☉     | ☽       | ☿       |
|----|-------|---------|---------|
|    | Rise. | South.  | Ri.&Set |
| 1  | 7 12  | 2 56    | 10 27   |
| 2  | 7 11  | 3 41    | 11 35   |
| 3  | 7 9   | 4 29    | 12 45   |
| 4  | 7 7   | 5 18    | 0 M. 45 |
| 5  | 7 5   | 6 13    | 1 53    |
| 6  | 7 3   | 7 11    | 3 5     |
| 7  | 7 1   | 8 13    | 3 53    |
| 8  | 6 59  | 9 18    | 4 39    |
| 9  | 6 57  | 10 17   | 5 20    |
| 10 | 6 55  | 11 14   | 5 53    |
| 11 | 6 54  | 12 9    | 6 15    |
| 12 | 6 52  | 1 A. 4  | D Sets  |
| 13 | 6 50  | 1 57    | 8 41    |
| 14 | 6 48  | 2 48    | 9 58    |
| 15 | 6 46  | 3 38    | 11 12   |
| 16 | 6 44  | 4 29    | 12 21   |
| 17 | 6 42  | 5 19    | 0 M. 21 |
| 18 | 6 40  | 6 9     | 1 25    |
| 19 | 6 38  | 6 59    | 2 16    |
| 20 | 6 36  | 7 48    | 3 4     |
| 21 | 6 34  | 8 35    | 3 52    |
| 22 | 6 32  | 9 22    | 4 15    |
| 23 | 6 30  | 10 7    | 4 42    |
| 24 | 6 28  | 10 49   | 5 7     |
| 25 | 6 26  | 11 32   | 5 29    |
| 26 | 6 24  | 12 15   | 5 56    |
| 27 | 6 22  | 0 M. 15 | D Rise  |
| 28 | 6 20  | 0 58    | 8 17    |

# March.

## Day-Break.

1. day 4 h. 21'. 6. day 4 h.  
 11. day 3 h. 58'. 16 day  
 3 h. 46'. 21. day. 3 h. 34'.  
 26. day 3 h. 22'.

|    | ☉     |    | D      |    | D       |  |
|----|-------|----|--------|----|---------|--|
|    | Rise. |    | South. |    | Ri.&Set |  |
| 1  | 6 18  | 1  | M.44   | 9  | 33      |  |
| 2  | 6 16  | 2  | 31     | 10 | 42      |  |
| 3  | 6 14  | 3  | 21     | 11 | 49      |  |
| 4  | 6 12  | 4  | 16     | 12 | 54      |  |
| 5  | 6 10  | 5  | 18     | 00 | M.54    |  |
| 6  | 6 8   | 6  | 18     | 1  | 53      |  |
| 7  | 6 6   | 7  | 17     | 2  | 40      |  |
| 8  | 6 4   | 8  | 14     | 3  | 22      |  |
| 9  | 6 2   | 9  | 9      | 3  | 56      |  |
| 10 | 6 0   | 10 | 2      | 4  | 27      |  |
| 11 | 5 58  | 10 | 54     | 4  | 55      |  |
| 12 | 5 56  | 11 | 46     | 5  | 22      |  |
| 13 | 5 54  | 12 | 38     | D  | Sets    |  |
| 14 | 5 52  | 1  | 30     | 8  | 58      |  |
| 15 | 5 50  | 2  | 22     | 10 | 11      |  |
| 16 | 5 48  | 3  | 14     | 11 | 17      |  |
| 17 | 5 46  | 4  | 6      | 12 | 14      |  |
| 18 | 5 44  | 5  | 57     | 0  | M.14    |  |
| 19 | 5 42  | 5  | 48     | 1  | 8       |  |
| 20 | 5 40  | 6  | 38     | 1  | 46      |  |
| 21 | 5 38  | 7  | 26     | 2  | 24      |  |
| 22 | 5 36  | 8  | 11     | 2  | 54      |  |
| 23 | 5 34  | 8  | 55     | 3  | 25      |  |
| 24 | 5 32  | 9  | 38     | 3  | 45      |  |
| 25 | 5 30  | 10 | 21     | 4  | 5       |  |
| 26 | 5 28  | 11 | 5      | 4  | 24      |  |
| 27 | 5 26  | 11 | 49     | D  | Rise    |  |
| 28 | 5 24  | 12 | 37     | 7  | 28      |  |
| 29 | 5 22  | 0  | M.37   | 8  | 37      |  |
| 30 | 5 20  | 1  | 28     | 9  | 47      |  |
| 31 | 5 18  | 2  | 21     | 10 | 56      |  |

# April.

## Day-Break.

1. day 3 h. 5'. 6. day 2 h.  
 51'. 11. day 2 h. 37'. 16. day  
 2 h. 21'. 21. day 2 h. 13'.  
 26. day 1 h. 47'.

|    | ☉     |    | D      |    | D       |  |
|----|-------|----|--------|----|---------|--|
|    | Rise. |    | South. |    | Ri.&Set |  |
| 1  | 5 16  | 2  | M.16   | 11 | 55      |  |
| 2  | 5 14  | 4  | 13     | 12 | 45      |  |
| 3  | 5 12  | 5  | 9      | 0  | M.45    |  |
| 4  | 5 10  | 6  | 5      | 1  | 28      |  |
| 5  | 5 8   | 7  | 0      | 2  | 5       |  |
| 6  | 5 6   | 7  | 55     | 2  | 36      |  |
| 7  | 5 4   | 3  | 49     | 3  | 3       |  |
| 8  | 5 2   | 9  | 42     | 3  | 29      |  |
| 9  | 5 0   | 10 | 33     | 3  | 55      |  |
| 10 | 4 59  | 11 | 24     | 4  | 31      |  |
| 11 | 4 57  | 12 | 17     | D  | Sets    |  |
| 12 | 4 55  | 1  | A.10   | 9  | 13      |  |
| 13 | 4 54  | 2  | 3      | 10 | 10      |  |
| 14 | 4 52  | 2  | 56     | 11 | 5       |  |
| 15 | 4 51  | 3  | 49     | 11 | 50      |  |
| 16 | 4 49  | 4  | 37     | 12 | 30      |  |
| 17 | 4 47  | 5  | 23     | 0  | M.30    |  |
| 18 | 4 46  | 6  | 8      | 1  | 00      |  |
| 19 | 4 44  | 6  | 53     | 1  | 30      |  |
| 20 | 4 42  | 7  | 37     | 1  | 54      |  |
| 21 | 4 40  | 8  | 22     | 2  | 13      |  |
| 22 | 4 38  | 9  | 7      | 2  | 34      |  |
| 23 | 4 36  | 9  | 52     | 2  | 57      |  |
| 24 | 4 35  | 10 | 37     | 3  | 20      |  |
| 25 | 4 33  | 11 | 22     | 3  | 48      |  |
| 26 | 4 31  | 12 | 10     | D  | Rise    |  |
| 27 | 4 30  | 0  | M.     | 0  | 9       |  |
| 28 | 4 28  | 1  | 00     | 9  | 49      |  |
| 29 | 4 26  | 1  | 57     | 10 | 44      |  |
| 30 | 4 24  | 2  | 48     | 11 | 34      |  |



# May.

## Day-Break.

1. day 1 h. 25'. 6. day 0 h.  
58. All the rest Day.

|    | ☉     | D.      | D       |
|----|-------|---------|---------|
|    | Rise. | South   | Ri.&Set |
| 1  | 4 23  | 3 46    | 12 14   |
| 2  | 4 21  | 4 46    | 0 M. 14 |
| 3  | 4 20  | 5 44    | 0 43    |
| 4  | 4 19  | 6 40    | 1 12    |
| 5  | 4 17  | 7 34    | 1 36    |
| 6  | 4 15  | 8 28    | 2 00    |
| 7  | 4 14  | 9 20    | 2 26    |
| 8  | 4 12  | 10 12   | 2 53    |
| 9  | 4 11  | 11 3    | 3 32    |
| 10 | 4 10  | 11 54   | D. Sets |
| 11 | 4 9   | 12 45   | 8 53    |
| 12 | 4 8   | 1 A. 36 | 9 43    |
| 13 | 4 7   | 2 26    | 10 36   |
| 14 | 4 6   | 3 16    | 11 3    |
| 15 | 4 4   | 4 6     | 11 30   |
| 16 | 4 3   | 4 54    | 11 54   |
| 17 | 4 2   | 5 41    | 12 16   |
| 18 | 4 1   | 6 27    | 0 M. 16 |
| 19 | 4 0   | 7 14    | 0 36    |
| 20 | 3 59  | 8 1     | 0 58    |
| 21 | 3 58  | 8 47    | 1 17    |
| 22 | 3 57  | 9 33    | 1 42    |
| 23 | 3 56  | 10 20   | 1 15    |
| 24 | 3 55  | 11 7    | 2 43    |
| 25 | 3 54  | 11 54   | 3 23    |
| 26 | 3 53  | 12 49   | D. Rise |
| 27 | 3 52  | 0 M. 49 | 9 25    |
| 28 | 3 52  | 1 48    | 10 8    |
| 29 | 3 51  | 2 53    | 10 42   |
| 30 | 3 51  | 3 50    | 11 13   |
| 31 | 3 50  | 4 42    | 11 28   |

# June.

## All Day.

|    | ☉     | D.      | D       |
|----|-------|---------|---------|
|    | Rise. | South.  | Ri.&Set |
| 1  | 3 50  | 5 32    | 12 5    |
| 2  | 3 49  | 6 21    | 0 M. 5  |
| 3  | 3 49  | 7 11    | 0 28    |
| 4  | 3 49  | 8 01    | 0 54    |
| 5  | 3 48  | 8 52    | 1 22    |
| 6  | 3 48  | 9 43    | 1 50    |
| 7  | 3 48  | 10 35   | 2 34    |
| 8  | 3 48  | 11 27   | D. Sets |
| 9  | 3 48  | 12 18   | 8 17    |
| 10 | 3 47  | 1 A. 8  | 8 55    |
| 11 | 3 47  | 1 56    | 9 28    |
| 12 | 3 48  | 2 41    | 9 54    |
| 13 | 3 48  | 3 22    | 10 17   |
| 14 | 3 48  | 4 4     | 10 40   |
| 15 | 3 48  | 4 48    | 11 00   |
| 16 | 3 48  | 5 31    | 11 21   |
| 17 | 3 49  | 6 14    | 11 42   |
| 18 | 3 49  | 6 59    | 12 5    |
| 19 | 3 49  | 7 45    | 0 M. 5  |
| 20 | 3 50  | 8 35    | 0 32    |
| 21 | 3 50  | 9 30    | 1 10    |
| 22 | 3 51  | 10 29   | 1 53    |
| 23 | 3 51  | 11 33   | 2 48    |
| 24 | 3 52  | 12 32   | 3 55    |
| 25 | 3 52  | 0 M. 32 | D Rise  |
| 26 | 3 53  | 1 30    | 9 9     |
| 27 | 3 53  | 2 24    | 9 37    |
| 28 | 3 54  | 3 16    | 10 4    |
| 29 | 3 55  | 4 7     | 10 26   |
| 30 | 3 56  | 4 59    | 10 54   |

# July.

## Day-Break.

1, 6, 11. days, all day, 16.  
day 0 h. 52'. 21. day 1 h.  
20'. 26 day 2 h. 42'.

|    | ☉       | D       | D       |  |
|----|---------|---------|---------|--|
|    | Rise.   | South.  | Ri.&Set |  |
| 1  | 3 57 5  | 51 11   | 18      |  |
| 2  | 3 58 6  | 39 11   | 44      |  |
| 3  | 3 59 7  | 23 12   | 29      |  |
| 4  | 4 00 8  | 6 0     | M. 29   |  |
| 5  | 4 01 8  | 51 1    | 12      |  |
| 6  | 4 02 9  | 40 1    | 59      |  |
| 7  | 4 03 10 | 33 2    | 51      |  |
| 8  | 4 04 11 | 30 3    | 52      |  |
| 9  | 4 06 12 | 24 D    | Sets    |  |
| 10 | 4 07 1  | A. 16 8 | 17      |  |
| 11 | 4 08 2  | 4 8     | 39      |  |
| 12 | 4 09 2  | 48 9    | 2       |  |
| 13 | 4 10 3  | 27 9    | 24      |  |
| 14 | 4 11 4  | 09 9    | 41      |  |
| 15 | 4 12 4  | 56 10   | 4       |  |
| 16 | 4 14 5  | 43 10   | 30      |  |
| 17 | 4 16 6  | 31 11   | 00      |  |
| 18 | 4 17 7  | 22 11   | 39      |  |
| 19 | 4 18 8  | 16 12   | 27      |  |
| 20 | 4 20 9  | 6 0     | M. 27   |  |
| 21 | 4 21 10 | 1 1     | 30      |  |
| 22 | 4 23 10 | 59 2    | 39      |  |
| 23 | 4 24 12 | 4 3     | 59      |  |
| 24 | 4 26 0  | M. 4 D  | Rise    |  |
| 25 | 4 28 1  | 5 8     | 7       |  |
| 26 | 4 30 2  | 00 8    | 32      |  |
| 27 | 4 31 2  | 54 8    | 57      |  |
| 28 | 4 33 3  | 47 9    | 24      |  |
| 29 | 4 35 4  | 39 9    | 55      |  |
| 30 | 4 36 5  | 31 10   | 26      |  |
| 31 | 4 38 6  | 21 11   | 9       |  |

# August.

## Day-Break.

1. day 2 h. 3'. 6. day 2 h.  
20'. 11. day 2 h. 35'. 16.  
day 2 h. 56'. 21. day 3 h.  
9'. 26 day 3 h. 17'.

|    | Rise.   | D.      | D       |  |
|----|---------|---------|---------|--|
|    | ☉       | South.  | Ri.&Set |  |
| 1  | 4 40 7  | 11 11   | 57      |  |
| 2  | 4 42 8  | 1 12    | 48      |  |
| 3  | 4 44 8  | 51 0    | M. 48   |  |
| 4  | 4 46 9  | 40 1    | 44      |  |
| 5  | 4 47 10 | 29 2    | 47      |  |
| 6  | 4 49 11 | 16 3    | 50      |  |
| 7  | 4 51 12 | 1 4     | 46      |  |
| 8  | 4 53 0  | A. 45 D | Sets    |  |
| 9  | 4 55 1  | 27 7    | 30      |  |
| 10 | 4 57 2  | 10 7    | 54      |  |
| 11 | 4 59 2  | 54 8    | 18      |  |
| 12 | 5 00 3  | 38 8    | 39      |  |
| 13 | 5 01 4  | 24 9    | 3       |  |
| 14 | 5 02 5  | 12 9    | 42      |  |
| 15 | 5 04 6  | 2 10    | 26      |  |
| 16 | 5 06 6  | 55 11   | 21      |  |
| 17 | 5 08 7  | 57 12   | 20      |  |
| 18 | 5 10 8  | 50 0    | M. 20   |  |
| 19 | 5 12 9  | 50 1    | 30      |  |
| 20 | 5 14 10 | 53 2    | 56      |  |
| 21 | 5 16 11 | 50 4    | 22      |  |
| 22 | 5 18 12 | 45 5    | 45      |  |
| 23 | 5 20 0  | M. 45 D | Rise    |  |
| 24 | 5 22 1  | 34 7    | 32      |  |
| 25 | 5 24 2  | 33 7    | 59      |  |
| 26 | 5 26 3  | 27 8    | 32      |  |
| 27 | 5 28 4  | 22 9    | 13      |  |
| 28 | 5 30 5  | 18 10   | 3       |  |
| 29 | 5 32 6  | 13 10   | 56      |  |
| 30 | 5 34 7  | 6 11    | 52      |  |
| 31 | 5 36 7  | 56 12   | 51      |  |

# September.

## Day-Break.

1. day 3 h. 33'. 6. day 3 h. 46'. 11. day 3 h. 57'. 16. day 4 h. 8'. 21. day 4 h. 19'.

|    | ☉     | ☽      | ☽       |    |      |    |
|----|-------|--------|---------|----|------|----|
|    | Rise. | South. | Ri.&Set |    |      |    |
| 1  | 5 38  | 8      | 43      | 0  | M.   | 51 |
| 2  | 5 40  | 9      | 27      | 1  |      | 55 |
| 3  | 5 42  | 10     | 09      | 2  |      | 58 |
| 4  | 5 44  | 10     | 49      | 4  |      | 02 |
| 5  | 5 46  | 11     | 32      | 5  |      | 07 |
| 6  | 5 48  | 12     | 15      | 6  |      | 12 |
| 7  | 5 50  | 1 A.   | 1       | D. | Sets |    |
| 8  | 5 52  | 1      | 50      | 6  |      | 55 |
| 9  | 5 54  | 2      | 40      | 7  |      | 23 |
| 10 | 5 56  | 3      | 30      | 7  |      | 56 |
| 11 | 5 58  | 4      | 21      | 8  |      | 35 |
| 12 | 6 00  | 5      | 13      | 9  |      | 24 |
| 13 | 6 2   | 6      | 5       | 10 |      | 22 |
| 14 | 6 4   | 6      | 58      | 11 |      | 30 |
| 15 | 6 6   | 7      | 52      | 12 |      | 43 |
| 16 | 6 8   | 8      | 46      | 0  | M.   | 43 |
| 17 | 6 10  | 9      | 40      | 2  |      | 3  |
| 18 | 6 12  | 10     | 35      | 3  |      | 21 |
| 19 | 6 14  | 11     | 32      | 4  |      | 49 |
| 20 | 6 16  | 12     | 32      | 6  |      | 13 |
| 21 | 6 18  | 0 M.   | 32      | 7  |      | 34 |
| 22 | 6 20  | 1      | 30      | D  | Rise |    |
| 23 | 6 22  | 2      | 26      | 7  |      | 15 |
| 24 | 6 24  | 3      | 21      | 8  |      | 00 |
| 25 | 6 26  | 4      | 15      | 8  |      | 52 |
| 26 | 6 28  | 5      | 7       | 9  |      | 52 |
| 27 | 6 30  | 5      | 56      | 10 |      | 59 |
| 28 | 6 31  | 6      | 43      | 12 |      | 3  |
| 29 | 6 33  | 7      | 28      | 0  | M.   | 3  |
| 30 | 6 35  | 8      | 13      | 1  |      | 5  |

# October.

## Day-Break.

1. day 4 h. 40'. 6. day 4 h. 50'. 11. day 4 h. 59'. 16. day 5 h. 5'. 21. day 5 h. 15'. 26. day 5 h. 26'.

|    | ☉     | ☽      | ☽       |    |      |    |
|----|-------|--------|---------|----|------|----|
|    | Rise. | South. | Ri.&Set |    |      |    |
| 1  | 6 37  | 8      | 57      | 2  |      | 5  |
| 2  | 6 39  | 9      | 39      | 3  |      | 5  |
| 3  | 6 41  | 10     | 20      | 4  |      | 8  |
| 4  | 6 43  | 11     | 3       | 5  |      | 14 |
| 5  | 6 45  | 11     | 47      | D  | Sets |    |
| 6  | 6 47  | 12     | 35      | 5  |      | 43 |
| 7  | 6 49  | 1 A.   | 24      | 6  |      | 8  |
| 8  | 6 51  | 2      | 14      | 6  |      | 42 |
| 9  | 6 53  | 3      | 6       | 7  |      | 28 |
| 10 | 6 54  | 3      | 59      | 8  |      | 23 |
| 11 | 6 56  | 4      | 52      | 9  |      | 27 |
| 12 | 6 58  | 5      | 46      | 10 |      | 40 |
| 13 | 7 00  | 6      | 42      | 11 |      | 55 |
| 14 | 7 02  | 7      | 39      | 13 |      | 11 |
| 15 | 7 04  | 8      | 34      | 0  | M.   | 11 |
| 16 | 7 06  | 9      | 28      | 2  |      | 29 |
| 17 | 7 08  | 10     | 22      | 3  |      | 49 |
| 18 | 7 10  | 11     | 15      | 5  |      | 9  |
| 19 | 7 12  | 12     | 8       | 6  |      | 30 |
| 20 | 7 14  | 0 M.   | 8       | D  | Rise |    |
| 21 | 7 15  | 1      | 1       | 5  |      | 57 |
| 22 | 7 17  | 1      | 55      | 6  |      | 49 |
| 23 | 7 19  | 2      | 48      | 7  |      | 44 |
| 24 | 7 21  | 3      | 41      | 8  |      | 43 |
| 25 | 7 23  | 4      | 33      | 9  |      | 46 |
| 26 | 7 24  | 5      | 23      | 10 |      | 48 |
| 27 | 7 26  | 6      | 12      | 11 |      | 50 |
| 28 | 7 27  | 6      | 59      | 12 |      | 52 |
| 29 | 7 29  | 7      | 44      | 0  | M.   | 52 |
| 30 | 7 31  | 8      | 27      | 1  |      | 55 |
| 31 | 7 33  | 9      | 8       | 3  |      | 00 |



# November.

## Day-Break.

1. day 5 h. 33'. 6. day 5 h. 38'. 11. day 5 h. 45'. 16. day 5 h. 49'. 21. day 5 h. 53'. 26. day 5 h. 56'.

|    | ☉     | ☽       | ☽       |
|----|-------|---------|---------|
|    | Rise. | South.  | Ri.&Set |
| 1  | 7 34  | 9 48    | 4 10    |
| 2  | 7 36  | 10 32   | 5 17    |
| 3  | 7 37  | 11 18   | 6 24    |
| 4  | 7 38  | 12 7    | D Sets  |
| 5  | 7 41  | 12 58   | 5 25    |
| 6  | 7 42  | 1 A. 52 | 6 17    |
| 7  | 7 43  | 2 50    | 7 19    |
| 8  | 7 44  | 3 49    | 8 29    |
| 9  | 7 46  | 4 46    | 9 43    |
| 10 | 7 48  | 5 40    | 10 59   |
| 11 | 7 49  | 6 30    | 12 14   |
| 12 | 7 50  | 7 16    | 0 M. 14 |
| 13 | 7 52  | 7 58    | 1 30    |
| 14 | 7 54  | 8 43    | 2 49    |
| 15 | 7 56  | 9 32    | 4 7     |
| 16 | 7 57  | 10 25   | 5 22    |
| 17 | 7 58  | 11 22   | 6 34    |
| 18 | 7 59  | 12 26   | D Rise  |
| 19 | 8 00  | 0 M. 26 | 5 19    |
| 20 | 8 01  | 1 26    | 6 24    |
| 21 | 8 02  | 2 22    | 7 24    |
| 22 | 8 03  | 3 14    | 8 29    |
| 23 | 8 04  | 4 2     | 9 32    |
| 24 | 8 05  | 4 47    | 10 35   |
| 25 | 8 06  | 5 29    | 11 37   |
| 26 | 8 07  | 6 8     | 12 39   |
| 27 | 8 07  | 6 45    | 0 M. 39 |
| 28 | 8 08  | 7 25    | 1 43    |
| 29 | 8 08  | 8 09    | 2 47    |
| 30 | 8 09  | 8 55    | 3 54    |

# December.

## Day-Break.

1. day, 5 h. 58'. 6. day 6 h. 1'. 11. day 6 h. 20'. 16. day 6 h. 1'. 21. day 5 h. 59'. 26. day 5 h. 56'.

|    | ☉     | ☽       | ☽       |
|----|-------|---------|---------|
|    | Rise. | South.  | Ri.&Set |
| 1  | 8 9   | 9 44    | 5 1     |
| 2  | 8 10  | 10 35   | 6 5     |
| 3  | 8 10  | 11 33   | 7 8     |
| 4  | 8 11  | 12 32   | D Sets  |
| 5  | 8 11  | 1 A. 29 | 6 4     |
| 6  | 8 12  | 2 25    | 7 15    |
| 7  | 8 12  | 3 20    | 8 34    |
| 8  | 8 12  | 4 13    | 9 52    |
| 9  | 8 12  | 5 5     | 11 8    |
| 10 | 8 12  | 5 57    | 12 24   |
| 11 | 8 13  | 6 49    | 0 M. 24 |
| 12 | 8 12  | 7 41    | 1 39    |
| 13 | 8 12  | 8 32    | 2 55    |
| 14 | 8 12  | 9 23    | 4 7     |
| 15 | 8 12  | 10 14   | 5 14    |
| 16 | 8 12  | 11 5    | 6 14    |
| 17 | 8 11  | 11 55   | 7 15    |
| 18 | 8 11  | 12 45   | D Rise  |
| 19 | 8 10  | 0 M. 45 | 5 56    |
| 20 | 8 10  | 1 34    | 7 01    |
| 21 | 8 09  | 2 22    | 8 3     |
| 22 | 8 09  | 3 8     | 9 7     |
| 23 | 8 08  | 3 51    | 10 12   |
| 24 | 8 08  | 4 31    | 11 14   |
| 25 | 8 07  | 5 9     | 12 18   |
| 26 | 8 07  | 5 52    | 0 M. 18 |
| 27 | 8 06  | 6 37    | 1 23    |
| 28 | 8 04  | 7 24    | 2 27    |
| 29 | 8 03  | 8 13    | 3 32    |
| 30 | 8 02  | 9 5     | 4 37    |
| 31 | 8 01  | 9 59    | 5 35    |



# The Suns Right Ascension in time for every Day at Noon.

|    | January |    | February |    | March |    | April |    | May |    | June |    |
|----|---------|----|----------|----|-------|----|-------|----|-----|----|------|----|
|    | h.      | '  | h.       | '  | h.    | '  | h.    | '  | h.  | '  | h.   | '  |
| 1  | 19      | 34 | 21       | 42 | 23    | 28 | 11    | 21 | 30  | 14 | 5    | 18 |
| 2  | 19      | 38 | 21       | 46 | 23    | 32 | 11    | 25 | 30  | 18 | 5    | 22 |
| 3  | 19      | 42 | 21       | 49 | 23    | 35 | 11    | 29 | 30  | 22 | 5    | 26 |
| 4  | 19      | 46 | 21       | 53 | 23    | 39 | 11    | 33 | 30  | 26 | 5    | 30 |
| 5  | 19      | 50 | 21       | 57 | 23    | 43 | 11    | 36 | 30  | 30 | 5    | 35 |
| 6  | 19      | 54 | 22       | 01 | 23    | 47 | 11    | 39 | 30  | 34 | 5    | 39 |
| 7  | 19      | 59 | 22       | 05 | 23    | 50 | 11    | 43 | 30  | 39 | 5    | 44 |
| 8  | 20      | 04 | 22       | 8  | 23    | 54 | 11    | 47 | 30  | 43 | 5    | 48 |
| 9  | 20      | 08 | 22       | 12 | 23    | 58 | 11    | 51 | 30  | 47 | 5    | 52 |
| 10 | 20      | 13 | 22       | 16 | 00    | 02 | 11    | 55 | 30  | 50 | 5    | 56 |
| 11 | 20      | 17 | 22       | 20 | 00    | 04 | 11    | 58 | 30  | 53 | 6    | 00 |
| 12 | 20      | 21 | 22       | 24 | 00    | 07 | 2     | 02 | 30  | 57 | 6    | 04 |
| 13 | 20      | 25 | 22       | 28 | 00    | 11 | 2     | 05 | 40  | 01 | 6    | 09 |
| 14 | 20      | 29 | 22       | 31 | 00    | 15 | 2     | 09 | 40  | 05 | 6    | 13 |
| 15 | 20      | 33 | 22       | 35 | 00    | 18 | 2     | 13 | 40  | 09 | 6    | 17 |
| 16 | 20      | 38 | 22       | 39 | 00    | 22 | 2     | 16 | 40  | 13 | 6    | 22 |
| 17 | 20      | 42 | 22       | 43 | 00    | 26 | 2     | 19 | 40  | 17 | 6    | 26 |
| 18 | 20      | 46 | 22       | 47 | 00    | 29 | 2     | 23 | 40  | 21 | 6    | 30 |
| 19 | 20      | 50 | 22       | 51 | 00    | 33 | 2     | 26 | 40  | 25 | 6    | 35 |
| 20 | 20      | 54 | 22       | 54 | 00    | 37 | 2     | 30 | 40  | 29 | 6    | 39 |
| 21 | 20      | 58 | 22       | 58 | 00    | 40 | 2     | 34 | 40  | 34 | 6    | 43 |
| 22 | 21      | 2  | 23       | 02 | 00    | 44 | 2     | 38 | 40  | 38 | 6    | 46 |
| 23 | 21      | 6  | 23       | 06 | 00    | 48 | 2     | 42 | 40  | 42 | 6    | 50 |
| 24 | 21      | 10 | 23       | 09 | 00    | 52 | 2     | 46 | 40  | 46 | 6    | 54 |
| 25 | 21      | 14 | 23       | 13 | 00    | 55 | 2     | 50 | 40  | 50 | 6    | 58 |
| 26 | 21      | 18 | 23       | 17 | 00    | 59 | 2     | 54 | 40  | 54 | 7    | 02 |
| 27 | 21      | 22 | 23       | 20 | 01    | 03 | 2     | 58 | 40  | 59 | 7    | 06 |
| 28 | 21      | 26 | 23       | 24 | 01    | 06 | 3     | 02 | 50  | 03 | 7    | 10 |
| 29 | 21      | 30 | 23       | 28 | 01    | 10 | 3     | 06 | 50  | 08 | 7    | 14 |
| 30 | 21      | 34 | 23       | 3  | 01    | 14 | 3     | 10 | 50  | 12 | 7    | 18 |
| 31 | 21      | 38 |          |    | 01    | 18 |       |    | 50  | 15 |      |    |

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The Suns Right Ascension in time for every  
Day at Noon.

|    | July |    |    | August |    |    | Septemb. |    |    | October |    |    | Novemb. |   |  | Decemb. |   |  |
|----|------|----|----|--------|----|----|----------|----|----|---------|----|----|---------|---|--|---------|---|--|
|    | h.   | '  |    | h.     | '  |    | h.       | '  |    | h.      | '  |    | h.      | ' |  | h.      | ' |  |
| 1  | 7    | 23 | 9  | 26     | 11 | 20 | 13       | 8  | 15 | 8       | 17 | 16 |         |   |  |         |   |  |
| 2  | 7    | 27 | 9  | 30     | 11 | 23 | 13       | 12 | 15 | 12      | 17 | 21 |         |   |  |         |   |  |
| 3  | 7    | 31 | 9  | 34     | 11 | 27 | 13       | 15 | 15 | 16      | 17 | 25 |         |   |  |         |   |  |
| 4  | 7    | 35 | 9  | 38     | 11 | 31 | 13       | 19 | 15 | 20      | 17 | 29 |         |   |  |         |   |  |
| 5  | 7    | 39 | 9  | 41     | 11 | 34 | 13       | 23 | 15 | 24      | 17 | 34 |         |   |  |         |   |  |
| 6  | 7    | 44 | 9  | 45     | 11 | 38 | 13       | 27 | 15 | 28      | 17 | 38 |         |   |  |         |   |  |
| 7  | 7    | 48 | 9  | 49     | 11 | 42 | 13       | 30 | 15 | 32      | 17 | 42 |         |   |  |         |   |  |
| 8  | 7    | 52 | 9  | 53     | 11 | 45 | 13       | 34 | 15 | 37      | 17 | 47 |         |   |  |         |   |  |
| 9  | 7    | 56 | 9  | 56     | 11 | 49 | 13       | 38 | 15 | 41      | 17 | 51 |         |   |  |         |   |  |
| 10 | 8    | 00 | 10 | 00     | 11 | 53 | 13       | 42 | 15 | 45      | 17 | 56 |         |   |  |         |   |  |
| 11 | 8    | 04 | 10 | 4      | 11 | 56 | 13       | 45 | 15 | 49      | 18 | 00 |         |   |  |         |   |  |
| 12 | 8    | 09 | 10 | 7      | 12 | 00 | 13       | 49 | 15 | 53      | 18 | 04 |         |   |  |         |   |  |
| 13 | 8    | 13 | 10 | 11     | 12 | 4  | 13       | 54 | 15 | 58      | 18 | 09 |         |   |  |         |   |  |
| 14 | 8    | 17 | 10 | 15     | 12 | 7  | 13       | 57 | 16 | 3       | 18 | 13 |         |   |  |         |   |  |
| 15 | 8    | 21 | 10 | 18     | 12 | 10 | 14       | 01 | 16 | 7       | 18 | 17 |         |   |  |         |   |  |
| 16 | 8    | 24 | 10 | 21     | 12 | 14 | 14       | 05 | 16 | 11      | 18 | 22 |         |   |  |         |   |  |
| 17 | 8    | 28 | 10 | 24     | 12 | 17 | 14       | 09 | 16 | 15      | 18 | 26 |         |   |  |         |   |  |
| 18 | 8    | 32 | 10 | 27     | 12 | 20 | 14       | 13 | 16 | 19      | 18 | 30 |         |   |  |         |   |  |
| 19 | 8    | 36 | 10 | 30     | 12 | 24 | 14       | 16 | 16 | 23      | 18 | 35 |         |   |  |         |   |  |
| 20 | 8    | 40 | 10 | 34     | 12 | 28 | 14       | 20 | 16 | 27      | 18 | 39 |         |   |  |         |   |  |
| 21 | 8    | 43 | 10 | 38     | 12 | 32 | 14       | 24 | 16 | 32      | 18 | 43 |         |   |  |         |   |  |
| 22 | 8    | 46 | 10 | 42     | 12 | 35 | 14       | 28 | 16 | 37      | 18 | 48 |         |   |  |         |   |  |
| 23 | 8    | 50 | 10 | 46     | 12 | 38 | 14       | 32 | 16 | 41      | 18 | 52 |         |   |  |         |   |  |
| 24 | 8    | 54 | 10 | 50     | 12 | 42 | 14       | 36 | 16 | 46      | 18 | 57 |         |   |  |         |   |  |
| 25 | 8    | 58 | 10 | 54     | 12 | 46 | 14       | 40 | 16 | 50      | 19 | 2  |         |   |  |         |   |  |
| 26 | 9    | 02 | 10 | 57     | 12 | 50 | 14       | 44 | 16 | 54      | 19 | 6  |         |   |  |         |   |  |
| 27 | 9    | 07 | 11 | 1      | 12 | 54 | 14       | 48 | 16 | 59      | 19 | 10 |         |   |  |         |   |  |
| 28 | 9    | 10 | 11 | 5      | 12 | 57 | 14       | 52 | 17 | 03      | 19 | 15 |         |   |  |         |   |  |
| 29 | 9    | 14 | 11 | 9      | 13 | 00 | 14       | 56 | 17 | 8       | 19 | 19 |         |   |  |         |   |  |
| 30 | 9    | 18 | 11 | 12     | 13 | 04 | 15       | 00 | 17 | 12      | 19 | 24 |         |   |  |         |   |  |
| 31 | 9    | 22 | 11 | 16     |    |    | 15       | 04 |    |         | 19 | 28 |         |   |  |         |   |  |

| Number | Names of the Stars           | Magnit. | Right Alcen. | Semidiurn. Arch. |
|--------|------------------------------|---------|--------------|------------------|
|        |                              |         | h. m.        | h. m.            |
| 1      | Andromeda's Head             | 2       | 0 52         | 9 51             |
| 2      | Medusa's Head                | 3       | 2 47         |                  |
| 3      | Perseus right side           | 2       | 3 16         |                  |
| 4      | Brightest of the Pleiades    | 3       | 3 28         | 8 18             |
| 5      | Bulls Eye                    | 1       | 4 17         | 7 26             |
| 6      | Orions left foot             | 1       | 4 59         | 5 16             |
| 7      | Middle of Orions Girdle      | 2       | 5 20         | 4 10             |
| 8      | Orions Right shoulder        | 2       | 5 28         | 6 37             |
| 9      | The Wagoner Auriga           | 2       | 4 52         |                  |
| 10     | Great Dog Sirius             | 1       | 6 31         | 4 28             |
| 11     | Castor in Gemini             | 2       | 7 14         | 9 38             |
| 12     | Little Dog Procion           | 1       | 7 22         | 5 23             |
| 13     | Pollux in Gemini             | 2       | 7 25         | 9 2              |
| 14     | Hydra's Heart                | 1       | 9 11         | 5 24             |
| 15     | Lions Heart                  | 1       | 9 51         | 7 17             |
| 16     | Great Bears fore Guard       | 2       | 10 43        |                  |
| 17     | Lions Tail                   | 1       | 11 32        | 7 34             |
| 18     | Virgins Spike                | 1       | 13 8         | 5 11             |
| 19     | Last in the great Bears Tail | 2       | 13 35        |                  |
| 20     | Arcturus                     | 1       | 14 1         | 8 1              |
| 21     | Little Bears fore Guard      | 2       | 14 50        |                  |
| 22     | Brightest in the Crown       | 3       | 15 21        | 6 50             |
| 23     | Scorpion's Heart             | 1       | 16 16        | 3 31             |
| 24     | Hercules Head                | 3       | 17 00        | 7 22             |
| 25     | Harp Star Lyra               | 1       | 18 26        |                  |
| 26     | Vultura Volans               | 1       | 19 35        | 6 40             |
| 27     | Swans Tail                   | 2       | 20 30        |                  |
| 28     | Pegasus Mouth                | 3       | 21 28        | 6 48             |
| 29     | Fomahant                     | 1       | 22 39        | 2 33             |
| 30     | Pegasus lower Wing           | 2       | 23 55        | 7 16             |

D

Use



the Month in the Head; and the day of the Month in the side, in the common Angle you have the Suns Right Ascension that day at Noon, and if at any other time, you must make proportion.

*use 2.* To find the time when any of the Stars in the former Table shall come into the Meridian, subtract the Suns Right Ascension from the Stars Right Ascension (set down in the last Table) the remainder is the time that the Star comes into the Meridian.

If the remainder be less than 12 hours, it is before midnight, if more than 12, after.

And if the Stars Right Ascension be less than the Suns, add 24 h. to it.

### Advice concerning Post-Letters from *London*.

On *Monday* to

|           |   |   |            |
|-----------|---|---|------------|
| France,   | } | { | Swedeland, |
| Spain,    |   |   | Denmark,   |
| Italy,    |   |   | Kent,      |
| Germany,  |   |   | The Downs. |
| Flanders, |   |   |            |

On *Tuesday* to

|            |   |   |           |
|------------|---|---|-----------|
| Holland,   | } | { | Ireland,  |
| Germany,   |   |   | Scotland, |
| Swedeland, |   |   | England,  |
| Denmark,   |   |   | Wales.    |
|            |   |   |           |

On *wednesday* to

*Kent* and the *Downs*,

On *Thursday* to

|         |   |   |              |
|---------|---|---|--------------|
| France, | } | { | All parts of |
| Spain,  |   |   | England and  |
| Italy,  |   |   | Scotland,    |

On *Friday* to

|            |   |   |          |
|------------|---|---|----------|
| Flanders,  | } | { | Denmark, |
| Germany,   |   |   | Holland, |
| Italy,     |   |   | Kent,    |
| Swedeland, |   |   | Downs.   |
|            |   |   |          |

On *Saturday* to

All parts of *England*, *Scotland*, and *Ireland*,

Letters are returned from *England*, *Scotland*, and *Ireland*, On *Monday*, *wednesday*, and *Friday*.

From *wales* every *wednesday*, and *Friday*.

*Kent* and the *Downs* every day.



An useful Table to know the true time of the Night  
without any Instrument for the Latitude 51. 32.  
taken out of my *Math. Compend.*

| Stars Names that set not.            | Rt. Asc.<br>und. the<br>Po. Star. | Differ.<br>. | Azimuth<br>under the<br>Pole Star. |
|--------------------------------------|-----------------------------------|--------------|------------------------------------|
| 3 <i>Cassiopeias</i> Hip             | 12 38                             | 0 10         | 01 E                               |
| 3 In her Knee                        | 13 08                             | 3 10         | 30 E                               |
| 2 In <i>Perseus</i> Right side       | 15 16                             | 15 2         | 21 E                               |
| 4 Great Bears Lip                    | 20 13                             | 9 1          | 43 E                               |
| 3 In his left Knee                   | 21 16                             | 12 1         | 51 E                               |
| 2 Lower in <i>Charles</i> Wain       | 22 53                             | 11 1         | 34 E                               |
| 2 Upper in the Wain                  | 22 56                             | 12 1         | 29 E                               |
| 2 The lower in the square            | 23 43                             | 6 0          | 57 E                               |
| 2 The upper                          | 0 2                               | 2 0          | 35 E                               |
| 2 The Rump <i>Aliet</i>              | 0 39                              | 0 0          | 2 W                                |
| 2 In the Tail <i>Penult.</i>         | 1 07                              | 4 0          | 25 W                               |
| 2 The last in the Tail               | 1 29                              | 6 0          | 55 W                               |
| 2 Last turn in <i>Draco</i>          | 1 48                              | 11 1         | 14 W                               |
| 2 Upper Guard                        | 1 25                              | 26 2         | 2 W                                |
| 2 Lower Guard                        | 2 59                              | 27 2         | 20 W                               |
| 2 Bright Star in <i>Draco's</i> Head | 5 25                              | 23 3         | 43 W                               |
| 3 Upper turn in <i>Draco</i>         | 6 38                              | 35 3         | 51 W                               |
| 3 <i>Cepheus</i> left Shoulder       | 8 43                              | 27 3         | 10 W                               |
| 3 In his Girdle                      | 8 55                              | 29 3         | 5 W                                |
| 3 In his right Knee                  | 11 10                             | 17 1         | 22 W                               |
| 3 In <i>Cassiopeias</i> Chair        | 11 41                             | 10 0         | 48 W                               |
| 3 In her Breast                      | 12 21                             | 10 0         | 15 W                               |

### The Use.

**I**N the first Column this Table has the Names and Magnitudes of the most noted Stars that never rise nor set in our Horizon. The second Column gives the Right Ascension in time when those Stars come under the Pole Star. The third Column gives the difference in time of the coming of those Stars betwixt the Pole Star and the pole it self. The fourth Column gives the

Azimuth

## *The Use of the Tables.*

Azimuth or distance, in degrees or minutes from the true Meridian that each Star will make, when it comes under the Pole Star, and whether on the East or West side of the Meridian.

1. To find the true time of night, you must observe by some perpendicular corner of an House, or by a string hung up with a great weight, when any of the Stars in the Table come directly into the perpendicular, together with the Pole Star, then if you subtract the Suns Right Ascension out of the Stars Right Ascension at its coming under the Pole Star found in the Table, (adding 24 hours if need be) the remainder is the time of the night.

The second Column shews the minutes of an hour that is spent betwixt any of the Stars, coming under the Pole Star and the Pole it self; therefore if by a minute Watch or Pendulum, you observe that time (in those which come under the Pole Star before the Pole) at that instant; if you place another perpendicular string behind the former, so as both intersect the Star, these two perpendiculars are in the Meridian-line, and will be the exactest way that can be found for the describing a Meridian.

The third Column shews the Azimuth or distance upon the Horizon from the North part of the Meridian East or West (as E and W signifie) that any of the Stars in the Table makes with the said Meridian; therefore at the instant when the Star comes under the Pole Star, if you place a perpendicular (as in the last) in a straight line with the former perpendicular Star, and the Pole Star, it shews a line so far from the true Meridian as the Table gives degrees and minutes, East or West, which set accordingly from the found line, gives the true Meridian. Note that the Rump or Arct of the great Bear comes under the Pole Star, within two minutes of a degree in the Azimuth, or less than the sixth part of a minute in time with the Pole Star; therefore when ever you find that Star under or over the Pole Star, it is in the Meridian without sensible error.

## *The Use of the Tables.*

4. By the distance in time betwixt one Star, and another coming under the Pole Star, Hour-Glasses, or time for trial of the exact going of Watches or Clocks may be observed: As for example, it will be found just two hours betwixt the last but one, and the last of the Stars in the great Bears tail under the Pole Star; as appears by the Table, the one coming under the Pole Star at 3 h. 40'. the other at 5 h. 40'.

*The use of the Table of Equations, which is the last Column of the Right hand page of each month.*

**I**N my last Years Almanack, in the last Column of the Right hand page, I gave you the Diurnal differences of the demonstrative Equations of time; whereby it appeared, how much the apparent Solar day, was shorter at any time than the mean: but finding that difficult to understand, and troublesom to use, I have here omitted it, and in its room, I have given you the Equations themselves, which shews how much a well regulated Pendulum ought to differ from the ☉ any time of the Year, supposing the Revolution of the Earth (which I hope will be demonstrated by Experiment) to be *Isochronical*.

There are only four days in the Year, *viz.* the 4th. of April, June the 6th. August the 21. and the 13th. of December, on which the Equations of days cease, if on any of these days you set a well regulated Pendulum to the hour found at the same time by the ☉, it will differ afterwards from the hour found by the ☉, only so much as the Equation in the Table. Take an Example, Let the Clock be set with the ☉ on the second of August in the morning; when the Equation is 0'. 00". if you let it move till the 30th. of September, and then examine it by the Sun, you will find it 13'. 00". too slow, for so much is the Equation of days to be subtracted from the apparent time found by the Sun, to gain the mean time shewn by the Clock: so if the hour by the Sun were 9 h. 00'. 00". in the morning, the time shewn by the Clock ought to be 8 h. 47'. 00", which if it be



## The Use of the Tables.

more, the Clock goes too fast, if less, too slow, and the Pendulum is to be lengthned, or shortned so much as is requisite to make it gain or lose the difference betwixt the noted time shewn by the Clock, and 8 h. 47'. 00" in 40 days elapsed betwixt the 21. of *August*, and the 30th. of *September*.

But if you set it with the Sun on the 6th. of *June* in the morning, when the Equation is again 0'. 00". and let it move without alteration till the 6th. of *July*, it shall then be 5'. 27". faster than the Sun, for so much is the Equation of days to be added to the apparent time: so if you observed the hour by the Sun 9 h. 00'. 00". mane, the hour by the Clock ought to be 9 h. 5'. 27". which if it be, the Clock is duly adjusted, if other ways, it be more or less, the Pendulum is to be lengthned, or shortned so much as is requisite to make it move the difference slower or swifter in 30. days, for there are so many betwixt the 6. of *June* and the 6. of *July*.

But if at any other time you would set your Pendulum true, you must set it so much faster than the hour by the Sun, as the Equation of time is, if it be to be added, but slower if it be to be subtracted, as suppose you would set it on the first of *February*, the Equation of days you find by the Almanack is then 13'. 46". A. or to be added to the apparent time, and so much you must set the Clock forwarder than the time found by the Sun or Star that Day: But if you would set it on the 13th. of *October*, you must set the Index 15'. 29", slower than the apparent time, for so much is the Equation that day subtractive, or to be taken from the apparent time found by the Sun, to gain the mean time shewn by the Clock, which if it move regularly, on the first of *December* shall be only 5'. 53". slower, but on the 30th. 7'. 58". faster than the apparent hour, and at all other times, only so much different, from the time found by the Sun, as is the Equation of days in the Column, that is swifter where you find A over it, and it is to be added: Slower where S. or it is to be subtracted.



*The Eclipses which happen this Year, 1678,*

**A**RE five, three small ones in the Limb of the Sun, and two of the Moon, of all which only the last will be visible to us in *England*.

The first Eclips of the Sun happening on the 11th. of *April* in the morning, will be only visible in the Eastermost parts of *Tartary*.

The second on the 5th. of *October*, in *Magellanica* and the unknown parts of the Earth, near the South Pole.

The third on the 4th. of *November* in the morning, in the North Ocean, and the Northeastermost parts of *Muscovy*.

The Eclipses of the Moon are both Total, her Center passing very near the Center of the Earths shadow in each of them. The first happens on the 16th. of *April*, its middle at 4 h. 40'. its end at 6 h. 40'. p. m. but the Sun sets not till 7 h. 32'. p. m. so that the Moon is got free of the shadow almost an hour before she rises, and this defect will only be observable by those, whose Meridians are more than one hour removed to the East from ours.

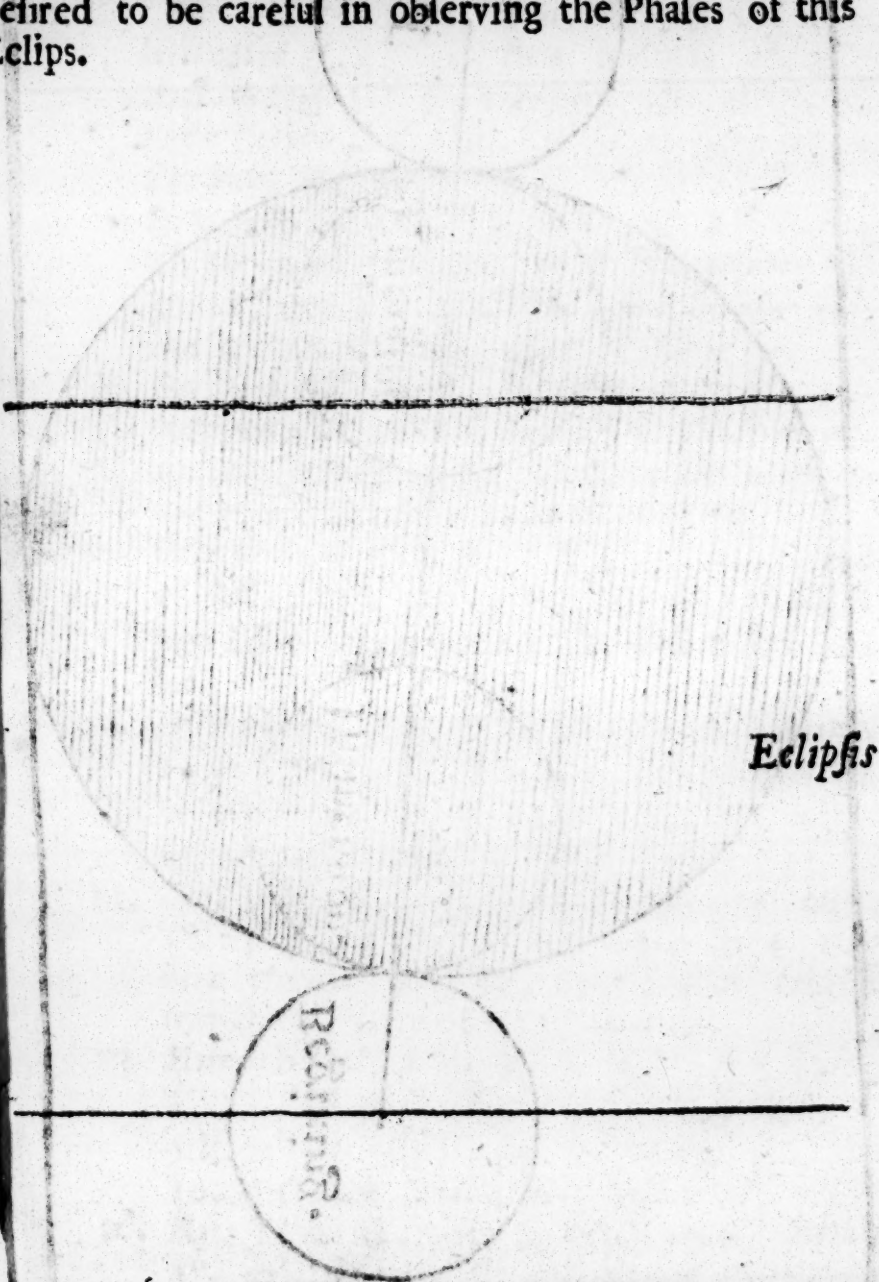
The latter Eclips of the Moon will be visible to us from the beginning to the end, if Clouds prevent not. It happens on the 19th. of *October*, the apparent time of the true Opposition of the Luminaries being at 8 h. 22'. 56". p. m. at *London*, at which time I Calculate

|   |    |     |    |                  |      |
|---|----|-----|----|------------------|------|
| Moons mean Apoge.   | s. | 0   | '  | "                | com  |
| Suns place in   | 5  | 04  | 39 | 54               | pro  |
| The <i>Argumentum Annuum</i>  | 5  | 06  | 47 | 53               | kno  |
| The <i>Excentricity</i>   | 5  | 15  | 27 | 59               | A    |
| The Moons place in the Orbit $\gamma$                                     |    | 486 | 97 |                  | dat  |
| Her $\Omega$  |    | 06  | 47 | 53               | defi |
| Therefore the $\Delta$ Latit. but   | 7  | 06  | 48 | 00               | Ecl  |
| And the apparent time of the $\gamma$ in the Orbit needs<br>no Reduction. |    | 90  | 00 | 00 $\frac{1}{2}$ |      |
|   |    |     |    | "                |      |
| The Moons Horizontal parallax   |    | 58  |    | 43               |      |
| The Suns $10''$ . Z   |    | 58  |    | 53               |      |
| The Suns Semidiameter   |    | 16  |    | 14               |      |
| The Semidiameter of the Earths shadow                                     |    | 42  |    | 39               |      |
| The Moons Semidiameter  |    | 16  |    | 15               |      |
| The sum or scruples of $\frac{1}{2}$ duration                             |    | 58  |    | 58               |      |
| The difference or scruples of $\frac{1}{2}$ <i>Mora</i>                   |    | 26  |    | 24               |      |
| Moons hourly motion   |    | 35  |    | 52               |      |
| The Suns  |    | 2   |    | 32               |      |
| Moons from the Sun  |    | 33  |    | 22               |      |
| Therefore   | h. | '   | "  |                  |      |
| The time of the Semiduration  | 1  | 45  |    | 55               |      |
| The time of Seimimora   | 0  | 47  |    | 28               |      |
| And,  | h. | '   | "  |                  |      |
| The beginning of the Eclips   | 6  | 37  |    | 01               |      |
| Immerfion   | 7  | 35  |    | 28               |      |
| Middle  | 8  | 22  |    | 56               |      |
| Emerfion  | 9  | 10  |    | 24               |      |
| End   | 10 | 8   |    | 51               |      |
| The Duration of the total Eclips  | 1  | 34  |    | 56               |      |
| The whole Duration of the Eclips  | 3  | 31  |    | 50               |      |

Good Observations of this Eclips will be of excellent use, for any two equal Phases, or the Occultation and Emerfion of any spot lying near the Parallel to the Ecliptick drawn over her Center, will give the Diameter of the Earths shadow, and

consequently her Horizontal Parallax, which being proportional to her Diameter; will ever after be known by observations of it.

And therefore such as are skilful and accommodated with good Telescopes and Movements are desired to be careful in observing the Phases of this Eclips.

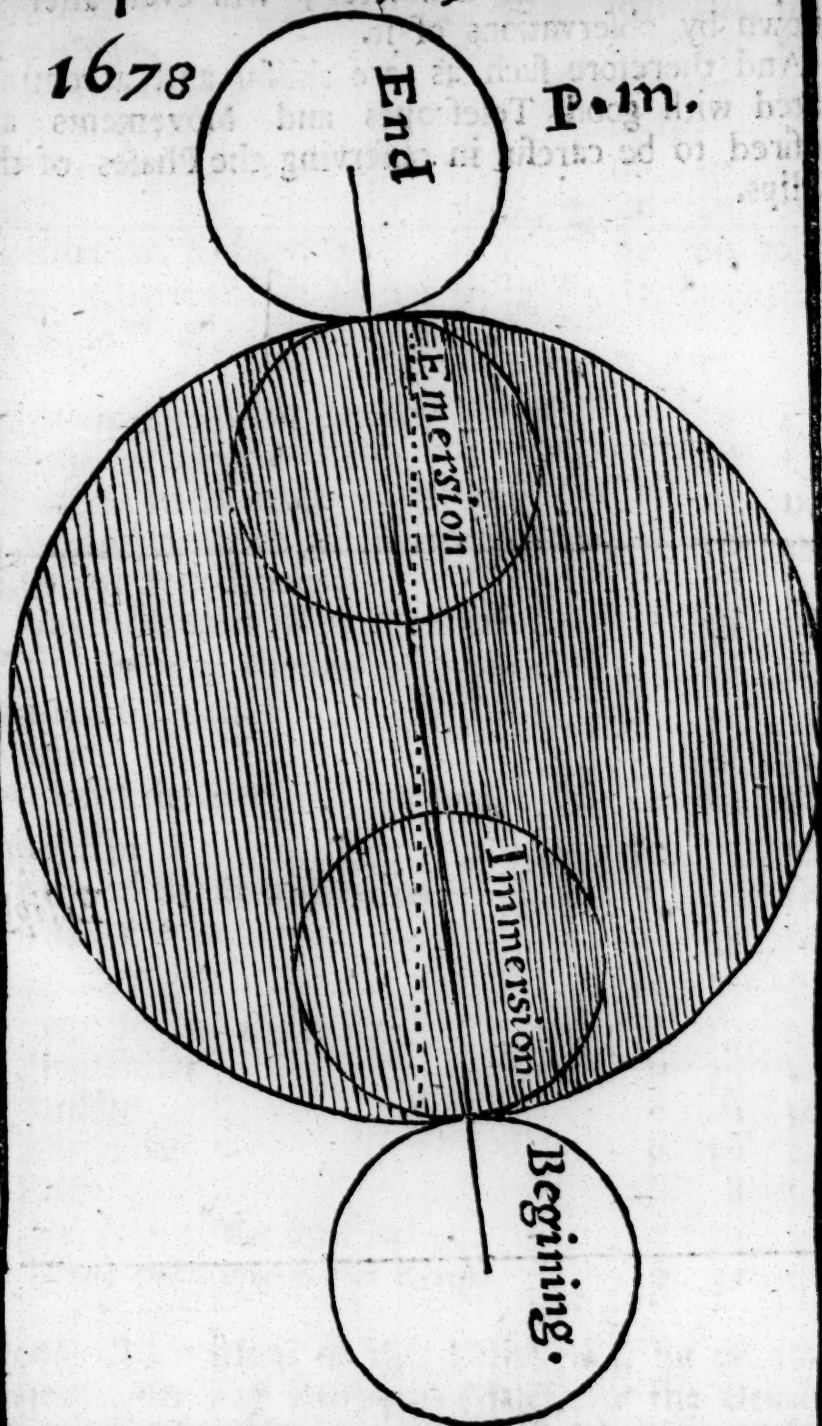


Eclipsis Lunæ, 19<sup>o</sup> Octobris

1678

End

P.m.





Lunæ ad fixas Appulsus Anno 1678. Londini  
observabiles ab Ephemeridibus J. Heckeri  
deducti per J. F.

- Januarii 3. Hor. 3 h. 00' mane D in  $\text{M}$   $19^{\circ} 45'$  cum  
latitudine  $4^{\circ} 33'$  Auf. fixæ latitudo  $5^{\circ} 41'$ .  
Auf. nonag.  $\text{N}$   $19^{\circ}$ , ergo hora 2 h. 20'. p. m.  
Lunæ limbus Austrinus, transit 7'. supra 33am  
 $\text{N}$  lucis 5æ.
5. Hora 4 h. 20'. mane D in  $\text{N}$   $15^{\circ} 13'$  latitu.  
 $3^{\circ} 10'$ . Auf. fixæ  $3^{\circ} 13'$ .  $\frac{1}{2}$  Nonagesimus  $\text{M}$   
 $5^{\circ} 12'$ . ergo hora 3 h. 30'. Lunæ limbus supe-  
rior transit 20'. infra 36am  $\text{M}$  lucis 5æ.
8. Hor. 7 h. 26', mane, D in  $\text{M}$   $26^{\circ} 8'$  lati-  
tudo vera  $0^{\circ} 16'$  Bor. fixæ  $0^{\circ} 7'$  Bor. Nonag.  
 $\text{N}$   $20^{\circ}$ . ergo hora 3 h. 30'. Lunæ limbus supre-  
mus transit 29'. infra 12am  $\text{N}$  lucis 4æ.
11. Hora 6h. 45'. mane D in  $\text{V}$   $9^{\circ} 1'$  latitu. vera  
 $3^{\circ} 36'$ . fixæ  $1^{\circ} 44'$ .  $\frac{1}{2}$  Bor. non.  $\text{N}$   $12^{\circ}$  distat  
ergo Lunæ limbus occidentalis 50'. a fixa lucis  
3æ.
19. Hora 4 h. 24'. p. m. D in  $\text{S}$   $10^{\circ} 40'$  latit  $1^{\circ}$ .  
 $1'$ , Bo. fixæ  $1^{\circ} 07'$ . nonag.  $\text{S}$   $10^{\circ} \frac{4}{5}$  ergo Lunæ  
in nonagesimo limbus Borens distat 34' min. a  
13. a  $\text{V}$  tis lucis 6æ.
22. Hora 9 h. 18'. p. m. D in  $\text{II}$   $20^{\circ} 18'$  latit.  
 $1^{\circ} 23'$ . Fixæ  $2^{\circ} 16'$ . Auf. nonag.  $\text{S}$   $4^{\circ}$  ergo  
hora circiter 9 h. 50'. Lunæ limbus inferior  
transit 13'. supra 18<sup>m</sup>  $\text{S}$  lucis 4æ.
23. Hora 9 h. 20'. p. m. D in  $\text{S}$   $2^{\circ} 19'$  latitu.  
 $3^{\circ} 17'$ . fixæ  $3^{\circ} 8'$ . Auf. nonag.  $\text{S}$   $4^{\circ} \frac{1}{4}$  ergo hora  
9 h. 25'. D limbus superior transit 19'. infra  
16am  $\text{II}$  orum lucis 4æ.
26. Hora 11 h. 28'. p. m. D in  $\text{N}$   $9^{\circ} 8'$  latitudo  
 $4^{\circ} 33'$ . fixæ  $5^{\circ} 8'$ . Auf. nonag.  $\text{S}$   $29^{\circ} \frac{2}{3}$   
ergo hora 11 h. 10' Lunæ centrum in eadem  
longitudine

longitudine versatur cum  $6^{\text{ta}}$   $\odot$ . lucis  $5^{\text{ta}}$  quam  
limbo boreo fere tangit, diligenter attendendum,  
forsan enim fixa fiat occultatio.

Februarii 5. Hora 6 h. 55'. Luna in  $\Gamma$   $5^{\circ}$ .  $10'$  lat. vera  
 $1^{\circ}$ .  $17'$ . fixæ  $0^{\circ}$ .  $33'$ . Sept. nonag. m.  $22^{\circ}$ .  $\frac{1}{3}$   
teget ergo Luna fixam Lucis  $5^{\text{ta}}$  hora 6 h. 25'  
quam reteget subortum  $\odot$  7. 5. latitudo centri  
Lunæ a  $\star$  in  $\odot$   $0^{\circ}$ .  $11'$ . Austræ.  
14. 5 h. 20'. Luna in  $\vee$   $23^{\circ}$ .  $16'$ . lat.  $2^{\circ}$ .  $13'$ .  
fixæ  $1^{\circ}$ . 41. Bor. nonag. II 7. 46. teget ergo  
Luna 20am  $\times$  ium lucis  $5^{\text{ta}}$  cuius fiet.

h.

Occultatio 5 58

Emersio 7 06

Lat. centri Dæa  $\star$  in  $\odot$   $0^{\circ}$ .  $3'$ . Aust.

17. Hora 7 h. 15'. Luna cum  $\text{h}$  in  $\Pi$   $3^{\circ}$ .  $37'$ .  
latitudo vera  $1^{\circ}$ .  $16'$ . Saturni  $1^{\circ}$ .  $40'$ . Aust.  
nonagesimus  $\odot$   $0^{\circ}$ . teget ergo Planetam cuius  
sub ea fiat

h.

Immersio 7 33

Emersio 8 40

Lati. centri Dæa  $\text{h}$  in  $\odot$   $0^{\circ}$ .  $2'$ . Aust.

eadem nocte hora 8 h. 45' scilicet circa  $\text{h}$  vi Emer-  
sionem, Luna centrum in eadem longitudine vide-  
bitur  $15^{\text{a}}$   $\odot$  lucis  $3^{\text{a}}$  equa limbus Lunæ inferior  
distabit  $37'$ .

23. Hor. 10 h. 00'. Luna in  $\Omega$   $17$ . 6. latitudo vera  
 $5^{\circ}$ .  $1'$ . fixæ  $5^{\circ}$ .  $43'$ . Aust. nonag.  $\Omega$   $3^{\circ}$ . teget  
ergo D 29am  $\Omega$  lucis  $5^{\text{a}}$  ejusque fiet sub ea

h.

Ingressus 9 15

Egressus 10 00

Lat. centri Dæa  $\star$  in  $\odot$   $0^{\circ}$ .  $10$ . Bor.

28. Hor. 1. 36. mane Dæa in  $\simeq$   $7^{\circ}$ .  $43'$ . lat.  $3^{\circ}$ .  $17'$ .  
fixæ  $3^{\circ}$ .  $25'$ . Aust. nonag.  $\text{m}$  14.  $\frac{2}{3}$  ergo hora  
13 h. 8'. Lunæ limbus superior transit  $21'$ . infra  
34am  $\text{m}$  s lucis  $5^{\text{a}}$ .

Martii 3. hora 2 h. 28'. mane D a in m 16°. 22' lat. vera  
0°. 7'. Aust. fixæ 1°. 48'. Aust. Non.  $\text{M}$  27°.  $\frac{2}{3}$   
ergo hora 1 h. 40'. mane D æ Limbus Austrinus  
transit 37'. supra 18am  $\simeq$  æ lucis 3æ.

17. 10 h. 00' p. m. D æ in  $\Pi$  13°. 18' latit 3°. 17'.  
Aust. fixæ 2°. 30  $\frac{1}{2}$  Non.  $\Omega$  17. ergo hor. 11'.  
10'. D occasuræ limbus superior transit 10'. in-  
fra 10am  $\oslash$  lucis 6ta.

18. hor. 7 h. 10' p. m. D in  $\Pi$  24°. 14'. lat. vera  
3°. 8'. fixæ 3°. 12. Aust. Nona.  $\odot$  18°. ergo  
hora 7 h. 50' Lunæ limbus superior transit 8'. in-  
fra 13. Orionis lucis 5æ eadem nocte rursus hora  
11 h. 28'. D in  $\Pi$  26°. 26'. lat. 3°. 17'. fixæ  
3°. 21'. Aust. Nonag.  $\text{M}$  3°.  $\frac{1}{3}$  ergo D æ occasuræ  
limbus Boreus transit 22'. infra 14am  $\vee$  lucis  
5ta.

20. hor. 6 h. 42' D in  $\odot$  18°. 7'. lat. 4°. 31'. fixæ  
5°. 52' Aus. Nona.  $\odot$  14°. ergo hora, 6 h. 34'.  
Lunæ limbus Austrinus transit 40'. supra 26am  
 $\Pi$  lucis 6ta.

25. hor. 10 h. 24'. D in  $\text{M}$  19°. 55'. lat. vera 4°. 21'.  
fixæ 5°. 41'. Aust. Non.  $\Omega$  26°.  $\frac{2}{5}$  ergo hora  
10°. 40'. D æ limbus Austrinus transit 27'. supra  
33am  $\Omega$  s lucis 5æ.

27. hor. 11 h. 00'. D æ  $\simeq$  15°. 13'. latit. vera 2°. 42'.  
fixæ 3°. 13'. Aust. Non.  $\text{M}$  4°.  $\frac{1}{4}$  teget ergo  
Luna 33am  $\text{M}$  s lucis 5æ cujus fiet

Occultatio 9 33

Emerſio 10 27

Lat. centri Lunæ a \* in  $\oslash$  0°. 7'.  $\frac{1}{2}$  Aust.

31. hor 2 h. 12'. mane D in m 26. 8. lat. 0°. 52'.  
ſep. Nonag.  $\simeq$  19°.  $\frac{2}{5}$  teget ergo D a 12am  $\simeq$   
lucis 4ta cujus ſub ea,

h. '

Immerſio 1 2

Egreſſus 1 57

Latit. centri D æ a \* in  $\oslash$  0°. 7'. Aust.

Aprilis 6. 4 h. 50' mane Dæ in ♋ 20°. 59'. latit. vera  
5°. 12'. fixæ 4°. 17. Bor. Nonag. ♊ 17°. teget ergo  
Luna 23am ♊ cuius erit  
h. '

Occultatio 4 00

Emerſio 5 5

Latit. centri Dæa \* in ♊ 00°. 00'.

7. 4 h. 14'. mane Da in ♋ 4°. 57'. latit. vera  
5°. 00'. Bor. fixæ 4°. 8½ teget ergo Da 22am  
♋ lucis 4ta hora 3 h. 18'.

quam reteget 4. 18.

Latit. centri Dæa \* in ♊ 0°. 4'. Aust.

16. hor. 7. 4p. m. Dæ in ♋ 14. 19. lat. vera 4°. 30'.  
Aust. fixæ 5°. 43. Nonag. ♋ 5°. ½ ergo hora  
7 h. 40'. Lunæ limbus Aust. transit 26'. supra  
13am ♋ lucis 4ta.

18. hora 8 h. 58'. Dæ in ♋ 9°. 9'. lat. vera 5°. 15'.  
Aust. fixæ 5°. 8'. Nonag. ♋ 27°. ergo hora,  
9°. 24'. Dæ limbus superior transit 32'. infra  
6tam ♋ lucis 3æ.

23. hor. 12 h. 53'. D in ♋ 11°. 44'. lat. Aust. 3°. 00'.  
fixæ 3°. 23'. Nonag. ♋ 23°. ergo hor. 13 h. 1'.  
Luna limbus supremus transit 16'. infra 35am ♋  
lucis 5ta.

28. hor. 1 h. 43'. mane D in ♋ 5°. 10'. lat.  
vera 1°. 41'. Bor. fixæ 00°. 33'. Non. m 18° ⅓  
fixam ergo lucis 5ta Luna teget

h. '

1 18

Reteget

1 48

Lat. centri Dæa \* in ♊ 0°. 13'. Bor.

28. hor. 9. 36. p. m. D in ♋ 16. 47. cum fixa lucis  
3æ cuius latitudo 1°. 32'. Bor. Nonag. ♋ 11°.  
Luna ergo nondum oritur, sed oritura est, ex-  
ortæque distantie ab hac cum duabus in propin-  
quo fixis commode satis tubo mensurari possint.

Maii 7. hor. 3 h. 44'. D in ♋ 13°. 3'. lat. ver 2°. 54'.  
Bor. Fixæ 1°. 5'. Bor. Nonag. ♋ 14°. ergo hora



Maii 15 h. 12'. *Lunæ limbus Austrinus transit* 38'.  
*supra 12am Vtis lucis 4tæ.*

16. hor. 9 h. 0'. *Dæ in*  $\Omega$   $17^{\circ}.6'$ . lat. vera  $5^{\circ}.15'$ .  
*fixæ*  $5.43$ . *Aust. Nonag.*  $\text{M}$   $18^{\circ}$ . ergo hora 9 h. 40'.  
*Lunæ limbus superior transit* 7'. *infra 29am*  $\Omega$   $s$   
*lucis 5tæ.*

24. hor. 1. 38. mane *D in*  $\text{m}$   $16^{\circ}.22'$ , lat.  $0^{\circ}.2'$ .  
*Bor. fixæ* 1. 48. *Aust. Nonag.*  $\text{Vp}$   $13^{\circ}.$   $\frac{1}{2}$  hora ergo  
 2 h. 4'. mane *Lunæ limbus inferior transit* 39'.  
*supra 18am*  $\text{æ}$  *lucis 3æ.*

24. hora 11. 37. p. m. *D in*  $\text{m}$  28. 42. latit. vera  
 1. 7. *Bor. fixæ* 1. 7  $\frac{1}{2}$  *Bor. Nonag.*  $\text{m}$  10  $\frac{1}{4}$  ergo  
 hora 11. 25. *D limbus inferior transit* 40'. *infra*  
*\*am lucis 3æ.*

26. hora 3 h. 35'. mane *D in*  $\text{f}$   $15^{\circ}.6'$ . latitudo  
*bor.*  $2^{\circ}.19'$ . *fixæ*  $2^{\circ}.16'$ . *Nonag.*  $\text{K}$   $9^{\circ}$ . ergo hora  
 15. 30. *Dæ limbus Boreus transit* 24. min. *infra*  
*\*am lucis 3æ.*

27. hor. 2. 27. mane *D in*  $\text{f}$   $28^{\circ}.46'$ . latit. vera  
 3. 29. *Bor. fixæ*  $2^{\circ}.27'$ .  $\frac{1}{2}$  *Non.*  $\approx 15^{\circ}$ .  $\text{A}$  teget  
 ergo *D* *\*am lucis 4tæ* hor. 2 h. 22'. mane.

*Reteget*  $3^{\circ}.25'$ .

*Lat. centri Dæ a* *\* in*  $\text{G}$   $0^{\circ}.8'$ . *Bor.*

30. hora 1 h. 30' mane *D in*  $\approx$  11. 56. latit. vera  
 5. 10. *Bor. fixæ*  $4^{\circ}.50'$  *Nonag.*  $\text{Vp}$   $23^{\circ}$  ergo hora  
 1 h. 20'. mane *Lunæ limbus superior transit* 20'.  
*infra 6tam*  $\approx$  *ii lucis 5tæ.*

Junii 3. hor. 3 h. 40'. mane *Dæ in*  $\text{V}$   $9^{\circ}.41$ . lat vera  
 $3^{\circ}.5'$ . *fixæ*  $2^{\circ}.11'$ . *Bor. Non.*  $\text{K}$   $20^{\circ}$ . teget ergo  
*Luna 11am*  $\text{K}$  *ium* *cujus fiet*

*Occultatio* 2 50 mane.

*Emergio* 3 55 orto Sole.

*Lat. centri Dæ a* *\* a in*  $\text{G}$   $0^{\circ}.3'$ . *Bor.*

4. hor. 2 h. 7'. mane *D in*  $\text{V}$   $22^{\circ}.21'$ . lat. *Bor.*  
 $2^{\circ}.5'$  *fixæ* 1. 51.  $\frac{1}{2}$  *Bor. Non.*  $\approx 21^{\circ}$ . ergo hora  
 1 h. 35'. mane *Lunæ limbus superior transit*  
 24. min. *infra 21am*  $\text{V}$  *lucis 5æ.*

Junii 21. hora 8. 56. D in  $\Upsilon$   $5^{\circ}.10'$ . latit.  $1^{\circ}.45'$ . Bor.  
fixæ  $0.33$ . Bor. Nonag.  $\approx 23.33$ . ergo hora  
8. 24. Lunæ limbus inferior transit 3 min. supra  
fixam lucis 3æ.

25. hora 9. 10. p. m. D in  $\approx 3^{\circ}.54$ . lat. Bor.  
 $4^{\circ}.58'$ . fixæ  $3^{\circ}.25$ . Nonag. m  $4^{\circ}$ . Lunæ ergo  
orientis centrum erit,  $20'$ . in consequentia 9æ  $\Psi$ i  
lucis 6tæ, cum majori latitudine  $36'$ .

26. hora 12 h. 28. D in  $\approx 28^{\circ}.59'$ . cum latitudine  
Boreali.  $5^{\circ}.00'$ . fixæ lat.  $4^{\circ}.17'$ . Nonag.  $\approx 19.\frac{1}{6}$   
teget ergo Luna 28am  $\Psi$ i lucis 6tæ eritque  
ejus h. '

Occultatio 12 8

Emerſio 12 48

Lat. centri D a  $\star$  in  $\zeta$   $0^{\circ}.13$ . Aust.

27. 11 h. 3'. D in  $\times$   $4^{\circ}.57'$ . lat.  $4^{\circ}.42'$ . fixæ  
 $4^{\circ}.5'$ . Bor. Nonag.  $\Psi$   $7^{\circ}$ . ergo hora 10 h.  $40'$ .  
D limbus Boreus transit  $6'$ . infra 22am  $\approx$  ii  
lucis 4tæ.

29. hora 3 h. 34' mane D in  $\times$   $22^{\circ}.10'$ . latit  $3^{\circ}.59'$ .  
Bor. fixæ  $3^{\circ}.25'$ . Nonag.  $\Psi$   $13^{\circ}$ . teget, ergo,  
Luna 7am  $\times$  ium hora 3 h. 37'. mane quam non  
nisi post ortum Solis potest retere: latit. centri  
D æ a  $\star$  a in  $\zeta$   $0.12$  Aust.

Julii 19. hora 11. 50. D in  $\Upsilon$   $15^{\circ}.6'$ . latit. vera  $2^{\circ}.42'$ .  
Bor fixæ  $2^{\circ}.16'$ . Nonag.  $\times$   $8^{\circ}.\frac{2}{3}$  ergo Lunæ, in ipſo  
ejus occaſu, limbus Boreus transit  $11'$ . infra  $\star$  am  
lucis 3æ.

20. hora 11. 0. D in  $\Upsilon$   $28^{\circ}.46'$ . latit. vera  $3^{\circ}.38'$ .  
fixæ  $2.27.\frac{1}{2}$  Nona.  $\approx 22.\frac{1}{3}$  ergo hora 11 h.  $32'$ .  
centro Lunæ eandem cum fixa longitudinem obti-  
nente, limbus ejus inferior eandem latitudinem  
cum fixa habebit.

22. hora 12. 58. D in  $\Psi$   $29^{\circ}.36'$ . latit. vera  $4^{\circ}.52'$ .  
Bor. fixæ  $4^{\circ}.41'$ . Nonag.  $\Psi$   $0^{\circ}.0'$ . ergo hora  
1 h. 55'. post med. noctem Lunæ limbus ſuperior  
transit.  $22'$  infra 3am  $\Psi$ i lucis 3æ.

Julii 23. hora 8 h. 20'. D in  $\times$   $11^{\circ} 56'$ . lat. vera  $5^{\circ} 00'$ . fixæ  $4^{\circ} 50'$ . Bor. Non.  $\mp 2^{\circ} \frac{2}{3}$  ergo hora 7.55. Lunæ limbus Boreus transit  $31'$ . infra 6tam  $\approx$ ii lucis 5tæ.

29. hora 10 h. 30'. D a in  $\oslash$   $10^{\circ} 28'$ . latit. Bor.  $0^{\circ} 2'$ . fixæ  $1^{\circ} 18'$ . Aust. Non.  $\approx 24^{\circ}$ . ergo hora 9 h. 54'. Lunæ limbus inferior transit  $10'$ . supra 14am  $\vee$ tis lucis 6tæ.

Aug. 19. hora 6<sup>o</sup>. 30'. D in  $\approx 3^{\circ} 55'$ . latit. Bor.  $5^{\circ} 00'$ . fixæ  $3^{\circ} 25'$ . Nonag. in  $\text{m}$   $27^{\circ} \frac{1}{2}$  Sol ergo nondum occiderit, at post ejus occasum tabo mensurabilis erit fixæ a limbo Lunæ distantia.

20. hora 9 h. 30'. D a in  $\approx 20^{\circ} 59'$ . latit.  $4^{\circ} 54'$ . fixæ  $4^{\circ} 17'$ . Nonag.  $\vee 12^{\circ} \frac{2}{3}$  teget ergo Luna 28am  $\vee$ p lucis 6tæ ejusq; fiet.

h.

Occultatio 9 57

Emerſio 10 55

Lat. centri D a a  $\ast$  in  $\oslash$   $0^{\circ} 9'$ . Aust.

21. hora 7 h. 20'. p. m. D in  $\times$   $4^{\circ} 57'$ . lat.  $4^{\circ} 34'$ . fixæ  $4^{\circ} 8'$ . Bor. Nonag. in  $\vee$ p  $0^{\circ} \frac{1}{3}$  ergo hora 7 h. 0'. Lunæ limbus Boreus transit 14. min. infra 22am  $\approx$ ii lucis 4tæ.

22. hora 10 h. 30'. p. m. D in  $\times$   $22^{\circ} 10'$ . latit.  $3^{\circ} 43'$ . fixæ 3. 25. Bor. Nonag.  $\times 22^{\circ}$ . ergo Luna in Nonagesimo sitæ limbus Boreus distat 17. min. à 7a  $\times$  lucis 4tæ.

24. hora 2. 35. mane D in  $\vee$   $9^{\circ} 41'$ . lat. vera  $2^{\circ} 28'$ . fixæ 2. 11. Bor. Nonag.  $\oslash 11^{\circ} \frac{1}{2}$  ergo hora 3. 25. mane Lunæ limbus Boreus transit  $4'$ . infra fixam.

25. hora 1<sup>o</sup>. 0'. mane D in  $\vee$   $23^{\circ} 17'$ . latit.  $1^{\circ} 20'$ . fixæ  $1^{\circ} 41'$  sept. Nonag.  $\vee 25^{\circ} 10'$ . ergo D a jam in Nonagesimo sitæ limbus Boreus distat  $48'$ . à 20  $\times$  ium lucis 5tæ.

27. hora 12. 40. p. m. D in  $\text{II}$   $3^{\circ} 59'$ . lat.  $2^{\circ} 11'$ . fixæ  $2^{\circ} 36'$ .  $\frac{1}{2}$  Merid. Nonag.  $\vee 23^{\circ} \frac{1}{2}$  ergo hora 11. 50. Lunæ limbus Boreus transit 4 min. infra

Aug. 31. hora 6. 16. mane D in ☿ 14°. 19'. latit. 4°. 40'.  
merid. fixæ 5°. 43'. Nonag. II 24.  $\frac{3}{4}$  ergo hora  
5 h. 44'. Luna centro eandem cum fixa longitudi-  
nem habente, limbus Boreus ejus distat 18'. min.  
à 13a II orum lucis 4ta.

Sept. 14. hora 7 h. 30'. p. m. D in ♄ 15°. 00'. lat. 4°. 50'.  
fixæ 4. 17. Nona. ☿ 20°.  $\frac{1}{2}$  ergo hora 7 h. 54'.  
Dæ limbus Boreus transfit 5. min. infra IIam  
¶ ii lucis 4ta.

15. hora 8. 18. D in ♄ 29°. 36'. latit. 5°. 10'.  
fixæ 4. 41. Bor. Nonag. ♄ 9°. ergo hora 8 h. 50'.  
D limbus Boreus transfit 7' infra 3am ¶ i lucis  
3tia.

20. hora 6 h. 46'. D in ♀ 13°. 3'. lat. 2°. 6'. Bor. fixæ  
1°. 5'. Nonag. ☿ 10, textit ergo D a in horizonte  
12am ♄ ium quam reteget 6 h. 45'.

26. Latit. centri D a ♄ in ☉ 0°. 3'. Bor.  
hora 2. 38'. mane D in II 26°. 26'. latit.  
4°. 0'. Merid. fixæ 3. 31. Nonag. II 3°.  
ergo hora 14 h. 00'. Luna limbus superior  
transfit 53 min. infra 14am Orionis lucis 5ta.

Octob. 10. hora 8. 38'. Dæ in ¶ 28°. 46'. lat. 4. 10. Bor.  
fixæ 2°. 27'.  $\frac{1}{2}$  Nonag. ♀ 7°.  $\frac{1}{4}$  ergo Luna ori-  
entis limbus Austrinus distet 38 min. a fixa lucis  
3tia.

17. hora 11 h. 25'. Dæ in ♀ 9°. 41'. latit. Bor.  
2°. 26'. fixæ 2°. 11'. Nonag. ☉ 13°.  $\frac{1}{2}$  ergo  
hora 12 h. 20'. Luna limbus Boreus transfit 7 min.  
infra IIam ♄ ium lucis 5ta.

20. hora 2. 30. mane D in ☉ 10. 28. lat. 0. 29.  
fixæ 1. 18. Aust. Nona. II 17  $\frac{1}{3}$  ergo hora 3 h. 30'.  
mane Luna limbus inferior transfit 11 min. infra  
14am ♄ tis lucis 6ta.

21. hora 7 h. 2'. D in II 3°. 59'. latit. 2°. 24'. fixæ  
2°. 36'. Aust. Nonag. ♄ 25°. ergo Luna orientis  
limbus Boreus distet 24. min. à 15 ☉ lucis 3a.



Octob. 22. hora 4 h. 25'. mane ☾ in ♀ 9°. 17'. latit.  
2°. 50'. fixæ 3°. 40'. Aust. Nona. ☾ 9°. ergo  
hora 5 h. 30'. Lunæ limbus Boreus transit 6'. supra  
16am & i lucis 6tæ.

24. hora 9. 20. ☾ in ☾ 14. 19. lat. 4. 54. fixæ  
5. 43. Aust. Nonag. ♀ 26°. ergo Lunæ limbus  
occidentalis nunc distet 25' à 13a ♀ eorum lucis  
4tæ quam sub horizonte texerat.

27. hora 3 h. 10'. mane ☾ in ♀ 11°. 41'. latit.  
5°. 15' fixæ 5°. 36'. Aust. Nona. ♀ 29°. teget  
ergo Luna 13am ☾ lucis 5tæ cuius fiet

Occultatio 1 25

Emersio 2 35

Latit. centri ☾ a \* in ♀ 0. 4. Aust.

Novem. 10. hora 8 h. 38'. ☾ in ♀ 20°. 59'. latitudo vera  
5. 6. fixæ 4°. 17'. Borealis Nonag. ☾ 1°. 5. Luna  
ergo occasura 28am ♀ lucis 6tæ teget, hora 9 h. 30'.  
latit. centri ☾ a \* 0°. 12. Borealis.

18. hora 4 h. 40'. mane ☾ in ♀ 3. 59. latit. vera  
2°. 22. fixæ 2°. 36'.  $\frac{1}{2}$  Aust. Nonagesimus ♀ 1°.  $\frac{1}{4}$   
ergo Lunæ occasuræ Limbus Boreus transit 6 min.  
infra 22am & i Lucis 5tæ.

23. hora 10 h. 50'. ☾ in ♀ 17°. 6'. latit. 5°. 6'.  
Aust. fixæ 5°. 43'. Nonag. ♀ 4°. ergo Lunæ ori-  
entis limbus distat. 30'. à 29a ♀ s lucis 5tæ quam  
sub Horizonte texerat.

28. hora 4 h. 20'. mane ☾ in ♀ 7°. 43'. lat. 2°. 29'.  
fixæ 3. 25. Aust. Nonag. ♀ 5°.  $\frac{1}{3}$  ergo ☾ ori-  
entis limbus transit 13'. supra 34am ♀ s lucis  
5tæ.

Decem. 13. hora 6 h. 35'. ☾ in ☾ 10°. 28'. latit. 0°. 25'.  
fixæ 1°. 18'. Aust. Non. ☾ 5°. ergo ☾ teget  
14am ♀ lucis 6tæ eritque fixæ  
h.

Occultatio 6 10

Emersio 6 40

Lat. centri ☾ a in \* ♀ 0°. 14'. Bor.

Decem. 15. hora 10 h. 6'. ☾ in ♀ 9. 17. latit. 2°. 48'.  
fixæ 3°. 40'. Aust. Nona. ♀ 13°.  $\frac{1}{2}$  ergo hora  
10. 15'. Lunæ limbus Aust. transit 6 min. upra  
16am & i lucis 6tæ.

20. hora 7 h. 38'. ☾ in ♀ 11°. 41'. latit. 5°. 00'.  
fixæ 5°. 36'. Aust. Nonag. & 21°.  $\frac{1}{2}$  ergo jam  
Lunæ limbus occidentalis distet 30 min. à 13a ☽ i  
quam sub Horizonte texerat.

26. hora 3 h. 28'. mane ☾ in ♀ 15°. 13'. Lat. 1°. 41'.  
fixæ 3°. 13'. Aust. Nona. ♀ 18°. ergo hora 14 h.  
Lunæ limbus Austrinus transit 38'. supra 38am  
i lucis 5tæ.

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Reliquorum

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Reliquorum quinq; Planetarum ad fixas Ap-  
pulsus ab eodem Ephemeride deducti: ad  
Annum 1678. per J. F.

| 1678.<br>Mensis<br>dies. | Hora | Plan. Loci. | Latitu. | Long. a<br>fixis. | Latitu. |
|--------------------------|------|-------------|---------|-------------------|---------|
|                          |      | S. . .      | o . .   |                   |         |
| Janua. 1                 | 6 V  | h II 3 56   | 1 51 A  | 32A 15 0          | 0 45B   |
| 1                        | 6 V  | ♀ X 7 11    | 1 03 A  | 2C                | 0 44A   |
| 4                        | 6 V  | ♀ X 10 33   | 0 51 A  | 28C 24 0          | 0 33B   |
| 6                        | 6 V  | ♀ X 12 50   | 0 43 A  | 7C 25 0           | 0 17B   |
| 9                        | 6 V  | ♂ X 0 57    | 0 59 A  | 1C 15 0           | 0 11B   |
| 31                       | 6 V  | ♀ V 9 20    | 1 36 B  | 21A 11 0          | 0 35A   |
| Febru. 4                 | 6 V  | ♀ V 13 10   | 2 2 B   | 7C 12 X           | 0 57B   |
| 24                       | 8 V  | h II 3 58   | 1 37 A  | Cum 15 0          | 0 58B   |
| Mar. 3                   | 6 M  | ♂ X 1 4     | 1 8 A   | 6C 15 0           | 0 2B    |
| 15                       | 5 M  | ♂ X 10 28   | 1 8 A   | 13C 24 0          | 0 16B   |
| 18                       | 5 M  | ♂ X 12 49   | 1 8 A   | 6C 25 0           | 0 8A    |
|                          |      | ♂ X 18 38   | 1 23 A  |                   |         |
| 25                       | 5 M  | ♂ X 18 16   | 1 8 A   | ♂ C 22 0          | 0 6A    |
| Apr. 27                  | 4 M  | ♂ V 13 42   | 1 1 A   | 12C 14 X          | 0 30A   |
| 29                       | 4 M  | ♂ V 15 11   | 1 0 A   | 13A 13 X          | 0 51A   |
| Maii 10                  | 3 M  | ♀ II 18 20  | 2 9 B   | 16A Telef.        | 0 17B   |
| 14                       | 3 M  | ♀ II 24 33  | 2 11 B  | 30A 25 A.         | 0 15A   |
| 23                       | 3 M  | ♀ 5 17      | 1 22 B  | 8A 10 II          | 0 39A   |
| Jun. 2                   | 3 M  | ♂ 10 28     | 0 44 A  | Cum 14 V          | 0 34B   |
| 20                       | 3 M  | ♂ 23 25     | 0 33 A  | 2C. Telef.        | 0 30A   |
| 29                       | 3 M  | h II 17 58  | 1 22 A  | 2A 41 0           | 0 2A    |
| Julii 1                  | 4 M  | ♂ II 1 9    | 0 25 A  | 24A 25 0          | 0 21B   |
| 1                        | 3 M  | ♀ II 3 42   | 3 00 A  | 16A 15            | 0 24A   |
| 6                        | 3 M  | ♀ II 8 53   | 2 53 A  | 24A 16 0          | 0 47A   |
| 10                       | 3 M  | ♀ II 13 6   | 2 44 A  | 11A 17 0          | 0 13A   |
| 17                       | 3 M  | ♀ II 20 39  | 2 25 A  | 22C 19 0          | 0 11A   |
| 20                       | 3 M  | ♀ II 23 55  | 2 17 A  | 19A 13 0          | 0 55E   |
| 20                       | 4 M  | h II 20 19  | 1 22 A  | 2 19 0            | 0 52B   |
| 25                       | 3 M  | ♀ II 29 27  | 2 01 A  | 29C 14 A          | 0 03A   |



# Residuum Tabulae Præcedentis.

| 1678.<br>Mensis<br>dies. | Hora |   | Plan. | Loci. | Latitu. | Long. a<br>fixis. | Latitu.  |        |
|--------------------------|------|---|-------|-------|---------|-------------------|----------|--------|
|                          |      |   | S.    | °     | '       |                   |          |        |
| Aug.                     | 1    | 4 | M     | ♀ ♄   | 7 20    | 1 37 A            | 8A 20 ♄  | 0 25 A |
|                          | 4    | 4 | M     | ♀ ♄   | 10 45   | 1 27 A            | 14C 11 ♄ | 0 39 B |
|                          | 8    | 4 | M     | ♂ ♄   | 26 36   | 0 6 A             | 9C 25 ♄  | 0 19 B |
|                          | 14   | 4 | M     | ♀ ♄   | 22 14   | 0 50 A            | 19A 29 ♄ | 0 7 B  |
|                          | 20   | 4 | M     | ♀ ♄   | 29 14   | 0 29 A            | 3A 11 ♄  | 0 35 B |
|                          | 22   | 4 | M     | ♀ ♄   | 1 34    | 0 22 A            | 20C 3 ♄  | 0 25 B |
|                          | 24   | 4 | M     | ♀ ♄   | 3 55    | 0 15 A            | 18A 5 ♄  | 0 11 A |
| Sept.                    | 5    | 4 | M     | ♂ ♄   | 13 52   | 0 34 B            | 8A 12 ♄  | 0 47 B |
|                          | 6    | 4 | M     | ♀ ♄   | 19 22   | 0 28 B            | 22C 11 ♄ | 0 12 A |
|                          | 9    | 4 | M     | ♀ ♄   | 22 59   | 0 36 B            | 11C 10 ♄ | 0 35 B |
|                          | 11   | 4 | M     | ♀ ♄   | 25 23   | 0 42 B            | 1C 8 ♄   | 0 14 B |
|                          | 16   | 4 | M     | ♀ ♄   | 1 26    | 0 55 B            | 27A 15 ♄ | 0 47 B |
|                          | 23   | 4 | M     | ♀ ♄   | 9 57    | 1 10 B            | 6A 38 ♄  | 0 10 A |
|                          | 25   | 4 | M     | ♂ ♄   | 25 10   | 0 58 B            | 9C 8 ♄   | 0 17 A |
|                          | 27   | 5 | M     | ♀ ♄   | 14 53   | 1 17 B            | 40C 24 ♄ | 0 23 A |
| Octob.                   | 3    | 6 | M     | ♀ ♄   | 22 19   | 1 26 B            | 18A 05 ♄ | 0 43 B |
|                          | 10   | 4 | M     | ♂ ♄   | 2 54    | 1 18 B            | 3C 5 ♄   | 0 4 B  |
|                          | 10   | 6 | M     | ♀ ♄   | 0 57    | 1 33 B            | 35A 6 ♄  | 0 8 B  |
|                          | 18   | 6 | M     | ♀ ♄   | 10 52   | 1 36 B            | 16C 8 ♄  | 0 51 A |
|                          | 20   | 6 | M     | ♀ ♄   | 13 21   | 1 36 B            | 23A 9 ♄  | 0 9 A  |
|                          | 27   | 6 | M     | ♀ ♄   | 22 5    | 1 34 B            | 9A 17 ♄  | 0 11 A |
|                          | 30   | 6 | M     | ♀ ♄   | 25 49   | 1 32 B            | Cum 19 ♄ | 0 52 A |
|                          | 31   | 6 | M     | ♀ ♄   | 29 25   | 2 13 B            | 32A 22 ♄ | 0 44 A |
| Nov.                     | 4    | 6 | M     | ♀ ♄   | 02 06   | 1 27 B            | 21A 24 ♄ | 0 54 B |
|                          | 7    | 6 | M     | ♀ ♄   | 09 04   | 1 42 B            | 43A 2 ♄  | 0 13 A |
|                          | 10   | 6 | M     | ♀ ♄   | 13 34   | 1 24 B            | 3A 5 ♄   | 0 10 B |
|                          | 10   | 6 | M     | ♀ ♄   | 09 36   | 1 20 B            | 11A 2 ♄  | 0 35 A |
|                          | 11   | 6 | M     | ♀ ♄   | 10 51   | 1 18 B            | 15C 1 ♄  | 0 52 B |
|                          | 13   | 6 | M     | ♀ ♄   | 13 21   | 1 16 B            | 10A 5 ♄  | 0 2 B  |
|                          | 23   | 6 | M     | ♀ ♄   | 25 55   | 0 57 B            | 14A 12 ♄ | 0 50 B |
|                          | 24   | 6 | M     | ♀ ♄   | 28 26   | 0 56 B            | 16A 12 ♄ | 0 12 A |

The foregoing Appulses I have added as in the former Years Works, deduced from the Ephemerides. The Applications of  $\text{h}$  and  $\text{x}$  may be observed most commonly a Week before and after the time noted in the Ephemerides; but for those of  $\text{q}$  and  $\text{q}$  it may be convenient to look for them the day preceding and following the times noted in the Table, the place of  $\text{q}$  is sometimes 15'. faulty, and  $\text{q}$  twice as much in *Heckers* Ephemerides, from whence these are derived. These errors I had neither leisure, nor encouragement, to correct, the Clouds seldom permitting a fourth part of the noted Appulses to be observed. I have therefore admonisht the Observer of this defect, which he may supply with a little diligence, after which I can only wish him, happy opportunities.

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To supply these Pages, I have out of my *Mathematical Compendium*, which will be shortly Reprinted with Addition, added a Table which is of constant use to know the price of either the neat or the great Hundred, which is 112 l. at any small rate the pound weight; the first Column contains the price of one pound from 1 farthing to 3 s. and in the second you have the price of the C. weight; the greater figures are pence, the lesser farthings. If the price exceed the Table, take half, or  $\frac{1}{4}$  of it, and double or redouble the price; and so seeking in the Table for the price of a C. weight, you have the price of a pound or unite answering. Ex. at 3 d.  $\frac{1}{2}$  the pound, what comes either C. to: put the price of a pound into farthings, *viz.* 14; for the neat C. account twice so many shillings, and as many pence as farthings; and for the great C. twice so many shillings, and as many groats as there be farthings in the pound weight. Ex. 14 s. and 14 s. make 28 s. and 14 d. makes 29 s. 2 d. the neat C. and 14 s. twice, and 14 groats makes 32 s. and 8 d. for the great C. So daily expences are for every penny spent a day, one pound, one half pound, one groat, and one penny: 5 d. a day is after that rate 7 l. 12 s. 1 d.

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945g

## A Table for buying and selling by the C. weight.

| l.p. | C. pr. |     |    | l.p. | C. pr. |     |       | l.p. | C. pr. |       |    | l.p. | C. pr. |    |    |
|------|--------|-----|----|------|--------|-----|-------|------|--------|-------|----|------|--------|----|----|
|      | l.     | s.  | d. |      | l.     | s.  | d.    |      | l.     | s.    | d. |      | l.     | s. | d. |
| 1    | 0.     | 2.  | 4  | 6    | 1      | 2.  | 18. 4 | 1    | 5.     | 14. 4 | 1  | 8.   | 10. 4  |    |    |
| 2    | 0.     | 4.  | 8  | 2    | 3.     | 0.  | 8     | 2    | 5.     | 16. 8 | 2  | 8.   | 12. 8  |    |    |
| 2    | 0.     | 7.  | 0  | 3    | 3.     | 3.  | 0     | 3    | 5.     | 19. 0 | 3  | 8.   | 15. 0  |    |    |
| 1    | 0.     | 9.  | 4  | 7    | 3.     | 5.  | 4     | 13   | 6.     | 1. 4  | 19 | 8.   | 17. 4  |    |    |
| 1    | 0.     | 11. | 8  | 1    | 3.     | 7.  | 8     | 1    | 6.     | 3. 8  | 1  | 8.   | 19. 8  |    |    |
| 2    | 0.     | 14. | 0  | 2    | 3.     | 10. | 0     | 2    | 6.     | 6. 0  | 2  | 9.   | 2. 0   |    |    |
| 3    | 0.     | 16. | 4  | 3    | 3.     | 12. | 4     | 3    | 6.     | 8. 4  | 3  | 9.   | 4. 4   |    |    |
| 2    | 0.     | 18. | 8  | 8    | 3.     | 14. | 8     | 14   | 6.     | 10. 8 | 20 | 9.   | 6. 8   |    |    |
| 1    | 1.     | 1.  | 0  | 1    | 3.     | 17. | 0     | 1    | 6.     | 13. 0 | 1  | 9.   | 9. 0   |    |    |
| 2    | 1.     | 3.  | 4  | 2    | 3.     | 19. | 4     | 2    | 6.     | 15. 4 | 2  | 9.   | 11. 4  |    |    |
| 3    | 1.     | 5.  | 8  | 3    | 4.     | 1.  | 8     | 3    | 6.     | 17. 8 | 3  | 9.   | 13. 8  |    |    |
| 3    | 1.     | 8.  | 0  | 9    | 4.     | 4.  | 0     | 15   | 7.     | 0. 0  | 21 | 9.   | 16. 0  |    |    |
| 1    | 1.     | 10. | 4  | 1    | 4.     | 6.  | 4     | 1    | 7.     | 2. 4  | 1  | 9.   | 18. 4  |    |    |
| 2    | 1.     | 12. | 8  | 2    | 4.     | 8.  | 8     | 2    | 7.     | 4. 8  | 2  | 10.  | 0. 8   |    |    |
| 3    | 1.     | 15. | 0  | 3    | 4.     | 11. | 0     | 3    | 7.     | 7. 0  | 3  | 10.  | 3. 0   |    |    |
| 4    | 1.     | 17. | 4  | 10   | 4.     | 13. | 4     | 16   | 7.     | 9. 4  | 22 | 10.  | 5. 4   |    |    |
| 1    | 1.     | 19. | 8  | 1    | 4.     | 15. | 8     | 1    | 7.     | 11. 8 | 1  | 10.  | 7. 8   |    |    |
| 2    | 2.     | 2.  | 0  | 2    | 4.     | 18. | 0     | 2    | 7.     | 14. 0 | 2  | 10.  | 10. 0  |    |    |
| 3    | 2.     | 4.  | 4  | 3    | 5.     | 0.  | 4     | 3    | 7.     | 16. 4 | 3  | 10.  | 12. 4  |    |    |
| 5    | 2.     | 6.  | 8  | 11   | 5.     | 2.  | 8     | 17   | 7.     | 18. 8 | 23 | 10.  | 14. 8  |    |    |
| 1    | 2.     | 9.  | 0  | 1    | 5.     | 5.  | 0     | 1    | 8.     | 1. 0  | 1  | 10.  | 17. 0  |    |    |
| 2    | 2.     | 11. | 4  | 2    | 5.     | 7.  | 4     | 2    | 8.     | 3. 4  | 2  | 10.  | 19. 4  |    |    |
| 3    | 2.     | 13. | 8  | 3    | 5.     | 9.  | 8     | 3    | 8.     | 5. 8  | 3  | 10.  | 1. 8   |    |    |
| 6    | 2.     | 16. | 0  | 12   | 5.     | 12. | 0     | 18   | 8.     | 8. 0  | 24 | 10.  | 4. 0   |    |    |

F I N I S.